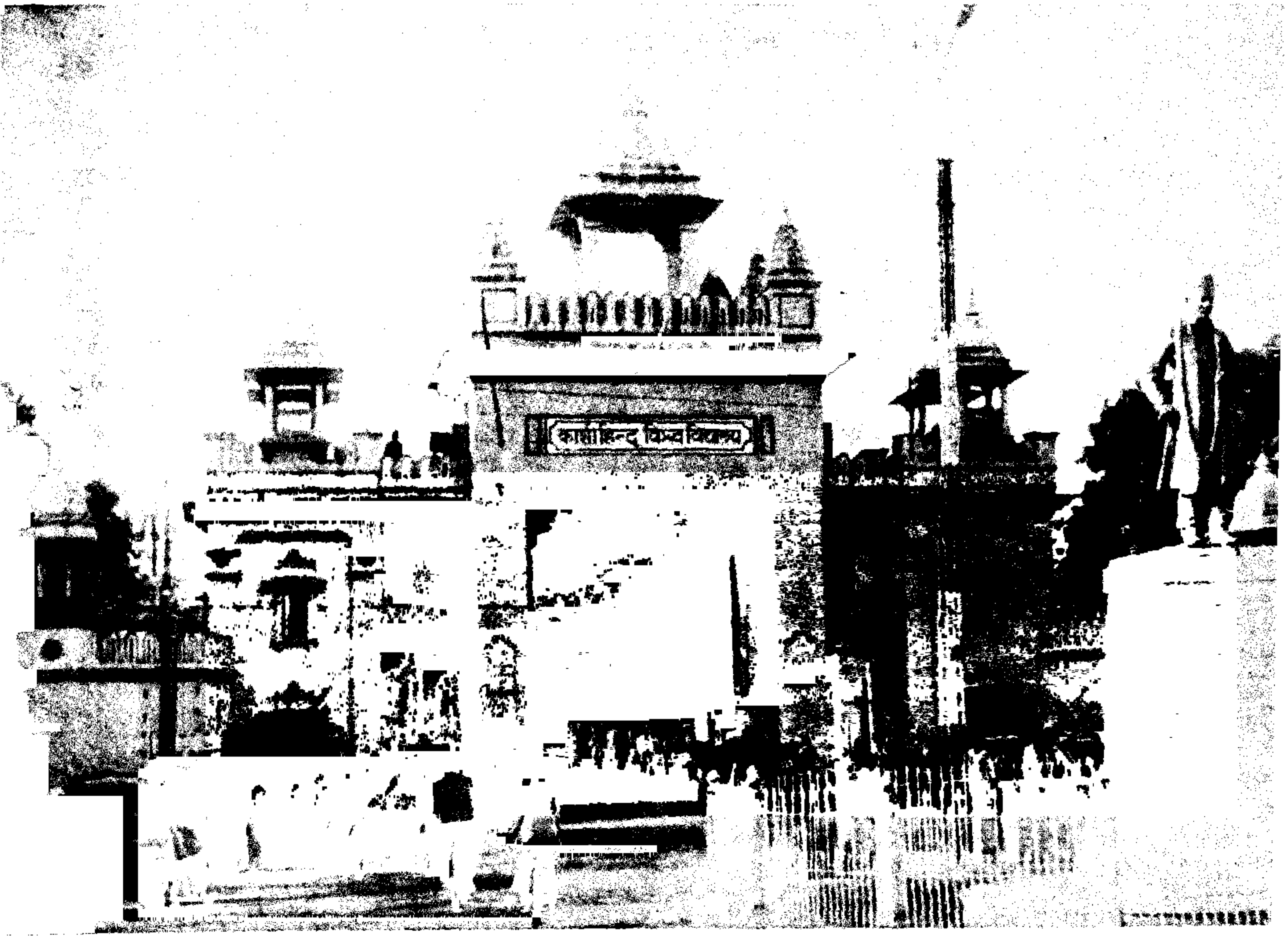
University News

MONDAY, DECEMBER 5, 1988 Rs. 5.00

Association of Indian Universities

63rd Annual Meeting



Our Hosts : Banaras Hindu University

Indian Institute of Technology, Madras

NATIONAL SUPERCONDUCTIVITY FELLOWSHIP

Applications are invited from suitable candidates for basic research/applied research on superconductivity in the research projects financed by the Ministry of Science and Technology, Government of India, in the following Departments/Centres at the Institute :

Chemistry, Physics, Metallurgical Engineering, Regional Sophisticated Instrumentation Centre (R.S.I.C.), Materials Science Research Centre (M.S.R.C.). Opportunities exist for registration for the Ph.D. programme at the Institute, subject to rules and regulations framed and made applicable from time to time.

Minimum Educational Qualifications

Master's degree in Chemistry (Inorganic/Physical/Solid State)/Physics (With Solid State Physics) with First Class or minimum 60% marks or equivalent and having a valid GATE score of not less than 70 percentile/qualified in UGC/CSIR Fellowship tenable from the current year in the relevant areas for fellowships in Chemistry, Physics, R.S.I.C. & M.S.R.C. Master's degree in Metallurgical Engineering/Materials Science/Materials Technology/Production Engineering with a First Class or minimum 60% marks or equivalent for fellowship in the Department of Metallurgical Engineering. Some experience in Material Processing/Processing of Ceramics will be desirable.

Fellowship

Holders of Postgraduate Degree in scientific disciplines other than Medical and Engineering	Rs. 1800/- p.m. for the first two years & Rs. 2100/- p.m. for the subsequent years.
Holders of Postgraduate Degree in Engineering/Technology	Rs. 2400/- p.m. for the first two years & Rs. 2500/- p.m. for the subsequent years.

Fellowships are tenable for an initial period of two years in the first instance and are likely to be extended as required.

Candidates called for interview will be paid Second Class to and fro rail-fare by the shortest route.

How to Apply

Candidates possessing the prescribed qualifications may apply on plain paper giving the following details along with a recent passport size photograph: (1) Name (2) Father's name (3) Address for communication (4) Details concerning University/Institute attended (5) Examination results indicating class marks/grades in individual subjects (6) GATE score: Year/Month (7) UGC/CSIR qualifying examination passed: Date of examination—valid upto (8) Date of birth (9) Place of birth (10) Mother tongue (11) Nationality (12) Whether SC/ST (13) Professional experience (14) Signature and date.

Applications should be sent to the Deputy Registrar (Academic), Indian Institute of Technology, Madras-600036 enclosing a Demand Draft for Rs. 15/- in favour of Indian Institute of Technology, Madras, payable at Madras and a self-addressed unstamped envelope of size 30 × 18 cm superscribing the envelope "Application for National Superconductivity Fellowship".

Last Date for receipt of completed applications is 15th December, 1988.

No. F. Acd./ARU/R 3/05/88-89.

UNIVERSITY NEWS

VOL. XXVI DECEMBER 5
No. 49 1988
Price Rs. 5.00

A Weekly Chronicle of Higher Education published by the Association of Indian Universities

IN THIS ISSUE

Education and Peace

Academic Reforms by 2000 A.D. 9
Communication and Higher Education 17
Education in Human Values 21
New Education Policy 33
Why Public Expenditure on Higher Education ? 39
New Technologies Vs Lecture Tradition 49
Story of Banaras Hindu University 57
Pt. Madan Mohan Malaviya 61
BHU : Important Milestones 63
BHU : A Synoptic View 64

Plus

All Regular Features

Opinions expressed in the articles are those of the contributors and do not necessarily reflect the policies of the Association.

Editor :

SUTINDER SINGH

EDUCATION AND PEACE

Narindar Singh*

> *We should hear, if we were listening,*
> *the mutter of the approaching storm.*
>
> **—Barbara Ward**

Introduction

Albert Einstein once made a sharp distinction between the animal part and the thinking part of human nature and described the two respectively as 'our foe' and 'our friend'. Being but parts of human *nature*, the 'foe' and the 'friend' of mankind must always have lived together. Indeed, even within an individual psyche, the good could subdue the evil for a given duration of time and be subdued by it for another. That was the point which R.L. Stevenson, for instance, made so effectively through his story about *The Strange Case of Dr. Jekyll and Mr. Hyde.*

But what we are here concerned with is an entirely different problem; and it lies in 'our foe' having more or less completely *overwhelmed* 'our friend' with the result that we cannot even take the existence of our species for granted any more. As Bertrand Russell once put it, 'we are in the middle of a race between human skill as to means and human folly as to ends'. Further, we have managed to survive so far 'owing to ignorance and incompetence' and may *not* expect to do so much longer. For, 'given knowledge and competence combined with folly, there can be no certainty of survival'. This means that 'unless men increase in wisdom as much as knowledge, increase of knowledge will be increase of sorrow'.[1]

The increase of sorrow which Russell warned us against with the vision of a prophet nearly forty years ago has continued to accelerate ever since. Besides, and reverting to Einstein's terminology, the very fact that of late we have been living with the threat of total extinction as a species shows, if anything, that at least in the relatively recent times *the cultivation of the animal part has received much greater organized attention through, say, the universities than the cultivation of the thinking part.*

A profound irony is involved here. For it is the work done at some of the most prestigious places of higher learning which has culminated in the development and fabrication of vast masses of omnicides and which in turn have made the termination of human history a very distinct *technical possibility.* For this reason alone, this termination can now take place any time. Indeed, as Noam Chomsky has written, it is a miracle that it has not already taken place. This means that it is not an imaginary or a distant threat but one which is very real and immediate. But this means, in turn, that threatened with termination that it is, human history may not longer be taken to be 'a race between education and catastrophe'. Rather, it may be seen to be a process which has now been distorted by a catastrophic misuse of education itself.

---

* *Professor of Economics, Zakir Husain Centre, Jawaharlal Nehru University, New Delhi-110 067.*

This being so, education may well be seen as a process whose essential aims and objectives such as humanization have been lost sight of. In order, therefore, to dispel the prevailing threat to our existence and thus to work for the restoration of human history, we can have no option but to make what Einstein called the thinking part of our nature come on top and to ensure, in Bertrand Russell's terms, the ascendancy of wisdom over mere knowledge.

This entails a renewed focus on the formulation of the basic concern of education. I submit that in the unexceedably grim context of the prevailing situation, there can be little more justifiable as an objective of education than the generation and propagation of a peace-oriented culture.

Indeed, a formal recognition of the paramount need for precisely such a 'pacification' of education has long been available in the very famous opening words of the Preamble to the Constitution of an *educational*, scientific and cultural oraganization called the UNESCO : 'since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed'. Evidently, it is through the process of education *alone* that we can locate the construction of the defences of peace in the *minds* of men. Little wonder that the acronym called 'UNESCO' contains an 'E' which stands for 'Educational',

But although people have been repeating the UNESCO affirmation about the defences of peace ever since it was first formalized some forty years ago, it still continues in effect to be no more than a pious sentiment. I am persuaded, therefore, that in oder to be able to give it substance, we would do well to rethink the very meaning of education and that of peace as well.

Two Kinds of Consciousness

For one reason or other, not many people take sufficient care to define 'education' itself precisely enough and most in fact leave it as a more or less undefined or perhaps even, undefineable nine-letter word. Little wonder that 'education' remains a grossly misusable abstraction. Thus, instead of asking for more of sanity through a conscientizing education which alone could have prevented a mad rush towards oblivion after the Sputnik, even the American literati could ask only for ever more of education of the undefined variety.

Involved here was a naive and uncritical presumption to the effect that more of education would produce ever more of such sophisticated tethnology as alone could ensure continued American military pre-eminence in the world. Also naive and uncritical was an associated or rather a prior presumption to the effect that the military equipment expected to be produced as a result of 'more of education' could only spell American military pre-eminence and not *global* disaster. Which of course would mean an American disaster, too, either through a sudden holocaust or through a relatively slow attrition of the material base itself which a relentless diversion of resources towards the production of baroque and militari' useless weapons systems would cause.

The essential trouble here may well not be with education as such, even if undefined, but the mass consciousness or rather, as Paulo Freire would say, with massified consciousness. This is the kind of consciousness for the fabrication of which ruling circles, everywhere have available a truly vast and expanding 'armamentarium' of newspapers, glossy magazines, TV, radio and so on.

If education is not even designed to resist the media onslaught; if in other words, it is not even meant intensely and consistently to question and to examine the prevailing order : mass consciousness must perforce become 'falser and falser'. This is to say, it must necessarily get overwhelmed by the increasingly spectacular but essentially and ultimately self-defeating performance of the contemporary military-industrial civilization. Moreover, while the spectacles become ever more spectacular, the capacity of mass or collective consciousness to comprehend and to meet the mounting gravity of the prevailing situation decreases. But the decreasing power of collective consciousness to grasp the grim meaning of the existential reality today can only signify the increasing naivete of what Paulo Freire calls naive consciousness. Which, in turn, cannot, but signify our increasing vulnerability to and defencelessness as a species against the hazards of contemporary military—industrialism. In particular, because technological sophistication *per se* continues to appear to most people as evidence of unending progress while, in fact, it may well be eating away the material basis of our existence itself.

Technological hybris and overreaching are but two sides of the same coin and both have long been associated with self-destruction. The Greek legend of Icarus, for instance was intended to make precisely this point. Deadalus, Icarus's father and a highly skilled craftsman, made wings for them both so that they could escape from the labyrinth of Crete. But the wings were attached to their bodies by wax ; and heedless of his father's advice to the contrary, Icarus flew higher and higher and got too close to the Sun. The wax melted, and he fell into the Aegean Sea.

The 'wax' in the legend suggests that technology, particularly, if it happens to be very daring, must have some crucial weakness or other. Evidently, the destruction of Icarus can be explained in term of his *refusal to recognize the inherent limits of technology. This is the essential bane of naive consciousness which can see nothing below the surface or anything other than illusions in the future.* It follows, therefore, that if education too is in effect designed to promote and to cultivate nothing more than naive consciousness, it can well promote the disruption of the very conditions of human existence. What I have been saying above argues that this precisely is what it has been doing.

In the circumstances, education ought to mean, if indeed it is to mean anything at all, a process which engenders 'critical consciousness'. We owe this concept to Paulo Freire who distinguishes it sharply from 'naive consciousness'[2] another concept of his which we have been talking about a little earlier. As he insists, it is critical consciousness *alone* which can enable us to perceive and then to meet the challenges of our time. In contrast, naive consciousness being by definition uncritical, does not even permit us to perceive, much less to meet and to over whelm those challenges.

Authentic education alone can help us dispel the naivete of collective consciousness which the powers that be manage somehow to produce. This means that to be authentic, education would have no option but to become a radical critique of the prevailing order. But this also means that it would do well to take care to be informed by a properly and self-consciously holistic perspective. For that alone can enable it to go to the very roots of the situation so that it can become a radical exercise in the literal sense of the term. But to be articulated, a holistic perspective has to take everything that can be shown to be significant into account.

Nevertheless, from a strictly educational point of view, the trouble is well worth taking. For a holistic perspective alone can make our intellection critical. Indeed, in Paulo Freire's formulation, no intellectual exercise can have any educational value *unless* it is critical and it cannot be *critical* unless it is holistic. In his own words : 'The investigation will be most educational when it is most critical, and most critical when it avoids the narrow outlines of partial or "focalized" views of reality, and sticks to the comprehension of total reality'.[3]

Put in this context, virtually the whole of what passes for education today, and in particular what passes for higher education, is quite evidently a-educational if not simply counter-educational. For it is characterized by a proliferation of specializations and even sub-specializations. Which cannot but entail a continuing fragmentation of the very process of intellection particularly when the Whole is kept out of account. Routine reminders about what is known as multi-disciplinary research are of no avail. In any case, what is needed for doing work of a non-spuriously educational significance is a concern with facts and interconnections the *criticality* of which can be established in open dialogue. This means that what we need is a concern with fundamental issues, not a fusion of different disciplines, each of which has otherwise been concerned with its own trivialities. For the sum of trivialities, no matter how numerous, can only be a triviality not profundity.

It is this impasse which Holism helps us avoid. For what it demands is not a multi-disciplinary concern with a problem which in itself may be a non-issue. What it demands instead is a concern with a problem which is itself of fundamental and existential importance ; and therefore it also demands an examination of all facts and relations which can be shown to be of relevance to it. Therefore, Holism inevitably requires one to dismiss as *impertinent* the traditional boundaries which have been erected to mark off one discipline from the rest. It is only natural that not many may find it easy or even possible to practise Holism thus conceived. For, in the first place, it is not all that simple to transcend the boundaries of the discipline one has been trained in. And in the second, if having transcended them, one escapes being dismissed as a dilettante, one certainly runs the risk of running into a professional cul-de-sac. The powers that be find it a lot easier to recognize the merits of a narrow specialist who has successfully internalized the values and mores of the prevailing order than to promote a holist who cannot but be an inveterate critic of that order.

But not unoften, it is plain intellectual inertia which may prevent one from taking one's own holistic agenda to its logical limit. I find it ironical in the extreme that it is none other than Paulo Freire himself who in failing to be sufficiently critical of modern technology as such fails also to focus his holistic beam on the most crucial and even defining feature of the contemporary world. And yet it is he who has taken such care to justify Holism in terms of its power to generate Criticality. Which in turn happens to be the staple diet which education must thrive on. As I see it, then, Paulo Freire cannot on the one hand reject the legitimacy of the *status quo* and on the other let pass unquestioned the legitimacy of the *modus quo*. Nevertheless, he himself told me once that he does not reject modern technology as such. But, then, what he fails to see is nothing less than the umbilical cord which joins the prevailing order of power with modern, or rather hyper technology. But in failing to take note of this simple and yet vital connection, he manages to be much less critical of the prevailing order than he ought to be.

The Imperative of Non-Conformity

It is easy to see that from a strictly *educational* point of view, it is of the very utmost importance to *continue* to cultivate consciousness of the critical kind. For that is the only way one can face the facts, as Copernicus would have said, 'with eyes open'. This means that one should always be willing and prepared to make room at the conceptual level for some previously unperceived dimension of reality or other.

For this is the only way to avoid what William James would have called 'a bloomin' buzzin' confusion' which comes often to bedevil the world of thought. In order therefore to minimize or even to eliminate altogether the intellectually devastating hazards of all kinds of dogmatism, we would do well to cultivate a conceptual framework so robust that it can deal with any existential novelty, no matter how unruly and wild. In order to ensure this, we would do well to re-examine our conceptual framework the moment we find that some novelty fundamental and prepotent enough to have transformed the very terms of existence is already there.

Indeed, no framework can be critical and educational enough, and must actually be counter-educational, if it happens to be averse to re-examination. This means that in order to *see* things as they *are*, to avoid massification and to convert education itself, as Bertrand Russell might have said, into 'a leaven of change', we need a conceptual framework which is so critical as to be critical of itself as well. This itself has a profound existential role to play. For this is absolutely the only way to defy the sentence of death which the powers that be happen to have passed against the human race. It is thus that an unrelenting profession of non-conformity, which means an inexorable cultivation of a culture of Dissent, can be seen to be the only way that we can hope to be able to dispel the exceedingly grim crisis of our times.

We seem to be very much in need of what Thomas Kuhn would call a 'revolutionary reform' of our perceptions. A brief reference to a similar reform initiated for example by Nicolaus Copernicus over four hundred and forty years ago would therefore be in order. In telling 'the Sun to stop and the Earth to go round', he *began* a process which would culminate later in a major paradigm shift. But while the replacement of the geocentric by the heliocentric astronomy has received all the attention, the concomitant replacement of the organic and holistic world-view by the mechanistic and reductionist one has suffered a major neglect. Copernicus, to be sure, did not abandon the organic paradigm as the following passage from his *Revolutions of the Celestial Spheres* will show: 'Meanwhile, the Earth conceives by the Sun and becomes pregnant with annual offspring'. As far as I am concerned, what matters here is not the treatment of the Earth as a female and of the Sun as a male. For, to me, a lot more important is the recognition that not only does the Earth revolve around the Sun but also that the Earth is a planet which is alive and further that the only source of all life on the Earth is the Sun. It was only later that men like Galileo, Descartes and Newton finally destroyed the organic world-view and replaced it by one which treated the whole universe as but a machine: 'The notion of an organic, living, and spiritual universe was replaced by that of the world as a machine, and the world machine became the dominant metaphor of the modern era'.[4] Far from being challenged, an unabashed scientism began to flourish in the form of reductionism. For a machine—any machine could be *reduced* to its constituent parts while an organic Whole could not be.

Mechanistic reductionism was carried to its extreme limits by Rene Descartes with whom man himself became a machine. In his own words: 'I do not recognize any difference between the machines made by craftsmen and various bodies that nature alone composes... I consider the human body as a machine... My thought... compares a sick man and an ill-made clock with my idea of a healthy man and a well-made clock'.[5]

Little wonder that as far as he was concerned, 'there is nothing included in the concept of body that belongs to the mind; and nothing in that of mind that belongs to the body'. This means that to him even the human body was a material structure which had nothing to be distinguished from, say, a clock. The mind, of course, was something different altogther.

This kind of division between mind and matter, which is also known as the Cartesian Partition, suggests that we are only isolated egos 'contained' within our bodies. In the historical context of geographical discoveries and accelerating trade and commerce, this replacement of human beings by fragmented and mechanistically oriented egos would in due course become a recipe, in Gregory Bateson's words, for 'greed, monstrous over-growth, war, tyranny and pollution'.[6]

The point of it all is that the kind of paradigm shift which Copernicus began and which, building on the work of Galileo, Descartes and others, Isaac Newton completed was revolutionary in one sense and counter-revolutionary in another. Revolutionary, because it brought about the replacement of an obscurantist and counter-factual astronomy by one which is illumining and factual. Counter-revolutionary, because it brought about the replacement of a life-preserving, organic and holistic world view by a life-disrupting, mechanistic and reductionist dogma. It may be ironical but is nevertheless true that geocentric astronomy, obscurantist that it was, still did not threaten our race with extinction. In contrast, the reductionist dogma, scientistic though it may be, is now known to have put us in a situation where we cannot even take our continuation as a species for granted. Shall we say, therefore, that the Copernican Revolution brought about the replacement of an obscurantism which was fairly safe by one which is dangerous in the extreme?

In the circumstances, we may continue to define science as a problem-solving activity all right, but still specify the kinds of problems that it may seek to solve and those that it may *not*. For we would do well not to forget what the French physiologist, Claude Bernard said over a hundred years ago : 'True science teaches us to doubt and in ignorance to refrain'. It follows that if not in ignorance but in full awareness of the potentially catastrophic consequences of their success, people continue not to refrain from but instead to persist with a variety of pursuits, they may not be taken to be doing true or normal science but only some grotesque distortion of it. Symbolizing this kind of anti-science is the 'solution' worked out by Stanislaw Ulam and Edward Teller which led to the fabrication of the hydrogen bomb in the early fifties. 'Research' being done these days for the development of battle stations in space is even a more expensive version of anti-science. Being far more destructive of resources, it is exceedingly more dangerous as well. Pierre Curie's warning that 'in criminal hands radium might prove very dangerous' comes to mind. Little could he have anticipated the kind of predicament we face. For the mere possession of vast quantities of lethal hardware, which we may just call 'radium', has made the hands so criminal and the psyches so brutal that they are impelled to acquire ever more of it.

It should be evident by now that what the contemporary civilization, disfigured as it is by anti-science, produces is not 'biophily' or the love of the life but its exact opposite, 'necrophily' or the love of death. If, then, education is to play its proper role as an ontological vocation of man, which Paulo Freire says it must, we would have no option but to say NO to the military-industrial scientism of our times. To help them utter this 'no' as emphatically as possible, the scientists themselves would do well to combine problem-solving with 'problematizing'. Which, in Freire's conception is an attempt to perceive the totality in order to be able to figure out what exactly is the issue of central concern. Indeed, once problem-solving gets situated within problematizing, it ceases altogether to be a technocratic undertaking so that the scientist in question can decide what kind of problem-solving ought to be attempted and what ought not to be. An ability to make this distinction ought to be, I submit, the very quintessence of what is called the scientific temper.

But the moment the scientist, having become critically conscious, decides that there in fact is a set of problems which science ought *not* to try to solve, he becomes a non-conformist as well. Besides, if we remember that solutions to these problems in the precise context of our time spell our possible destruction as a race, we begin to see non-conformity as a basic condition of life. But since hyper-technology *happens* to be the way that anti-science's solutions manifest themselves, non-conformity thus understood cannot but signify a rejection of a great deal of modern technology too. Even so, what I *am* pleading for is not some kind of a technophobia. Rather, what I *am* pleading for is a sufficiency of Discrimination which would permit us to distinguish between what Ivan Illich once called convivial technology on the one hand and what is nothing but a technology of disruption on the other. This is a distinction of the very utmost importance.

For while the former permits us to create and to sustain relations of amiability among men and also between men and Nature, the latter is a source of a double disruption: the disruption of the bonds among men and of the bonds between men and Nature, too. This kind of compounded disruption we can hardly afford.

Power, Violence and Peace

But such are the compulsions of the pyramids of political and economic power now dominant the world over and in particular of the superpower establishments that this kind of disruption continues to intensify. This can only be an explosive situation. In fact, already in 1947, Robert Oppenheimer himself made the point that 'the world is moving in the direction of hell with a high velocity, a positive acceleration and probably a positive rate of change of acceleration'.[7]

Therefore, in the prevailing context of the overriding reality of the nuclear overkills of today, the minimum that ought to be evident is that there can be no such thing as a nuclear peace, that is, peace in the shadow of the nuclear kill-alls; not even in the short run. This is easy to see. Being vehicles of indiscriminate and vast destruction, nuclear missile systems cannot even be fired to achieve any specific and specifiable *military* objective. They may only get fired by accident. Indeed, it is intriguing that such an accident has not taken place so far; more so because ever more of these missiles continue to be acquired all the time. But the fact, for example, that in the United States alone over five thousand men are removed from missile duty *every year* for drug, alcohol and other psychological problems suggests that the threat of a nuclear holocaust by accident is frightfully real. So real, indeed, that all the ingenious precautions which the superpower military establishments continue to devise in this connection can offer us but little comfort. The remedy, therefore, lies not in taking even more elaborate precautions but in dismantling these vehicles of destruction. Indeed, each one of them carries the signature of Satan himself on its nose cone; and it would do us immense good to try to design a missile-free world. In any case, it hardly seems to make any sense first to *create* a situation in which an accident, if it takes place, can only be catastrophic and then to try to see that such an accident does not actually take place. In the circumstances, an accidental firing of a nuclear missile which will set off a missile chain reaction might turn out to be the *immediate* cause of a nuclear holocaust. But the *essential* cause will still lie in the relentless accumulations of the missile systems themselves. This seems to be the reason why, as C. Wright Mills might have said, the *immediate cause* of the nuclear holocaust will be the *long preparation* for it. Therefore, to combine the *preparation* for a catastrophic accident with the *fear* of one is nothing but drastic reduction of reason.

But all this, grim as it is, ought not to make us oblivious of the two other holocausts *which are* already raging in the world and which, if not put out soon enough, could destroy the future of our race *even without a nuclear holocaust ever taking place.* The first of these Johan Galtung would designate as the 'Silent Holocaust' and the other I should like to describe as the 'Umbrella Holocaust'.

ove.
e be in
rth to go

The Silent Holocaust manifests itself as follows: (a) in the extremes of human misery and suffering caused directly by a massive and escalating pre-emption of resources by militarism, and (b) in the relentless attrition of the Earth's biosphere caused directly by the rampancy of the petrochemical and nuclear industries. Thus, according to Ruth Sivard, it takes $5,90,000 *a day* to operate *one* modern aircraft carrier; and every day, too, as many as 14000 children die in Africa alone because of hunger and hunger-related diseases.[8] The continuing elimination of entire species of life and a reckless reduction of the Earth's forest cover form part of the Silent Holocaust and will before long have exposed children all over the globe, those of Europe and the Americas not excluded, to a similar fate.

Also awesome is the fury of the Umbrella Holocaust or the holocaust raging under the umbrella of the nuclear omnicides. What is happening may be schematized as follows: Nuclear stockpiles which cannot be expended continue to mount nevertheless. But since what they hold is the promise of a complete holocaust, the powers possessing them can and do use them as a cover or an umbrella under which their 'conventional weapons' industries also continue to flourish. But since they cannot fire even these weapons at each other and since they cannot continue indefinitely to stockpile them either, they cannot but seek to carry them to third parties most of which also happen to be in the Third World. This lethal transmission can take place in the form of 'military aid' and commercial exports or through direct military intervention.

But, then, the establishments of the minipowers which come to acquire these weapons must find ways of expending them also. In particular, because unlike the nuclear stockpiles, they *can* be expended and indeed have to be expended for the 'wheels' of the weapons industry to keep moving. Therefore, it is in being regularly produced and expended that the conventional weapons can take on the 'storage' costs of the nuclear missile systems. Incidentally, funds allocated for the production of nuclear weapons happen to be around a sixth of those allocated for the production of conventional weapons. Still, it is the latter which are actually put to *direct* military use by different national establishments.

Since this has become an integral component of the [illegible]tical culture of oure time, and since the technology mechan ivering death is becoming ever more lethal and becom sticated, it is only natural that death should be so rampant *even during a period of peace which the world* is said to have enjoyed since the end of the Second War. Indeed, during the forty years of the 'Cold War', four times as many war-deaths have taken place as during the first four decades of the present century which included a very hot world war as well.

In a situation in which violence has become such a fetish and in which the blowing up of the planet itself has become at least a distinct *technical possibility*, we surely have a right to expect that those in the business of education will assign to peace an overriding priority. It seems, therefore, that our only hope is authentic and pacified education. *If we can manage to use it somehow to put out all the holocausts now raging* and to dispel the threat of extinction as well, we will have effected the greatest educational miracle of all time; and if we fail altogether, we will not possibly have made the situation in any way more menacing than it now is. Pacified education, in other words, is a perfectly safe bet and indeed the best one. For it may well be through such an education alone that we will be able to change our 'modes of thinking' which, as Einstein said, even the 'unleashed power of the atom' had not been able to blast.

It follows, therefore, that there can be nothing more important, nothing more urgent, that those in the business of education can do today than to put peace at the centre of their *professional* concerns; and conversely, there can be nothing more cynical, nothing more unethical, that they can do today than to continue to behave as if all is for the best in the best of possible worlds. In other words, if they do not put peace at the very centre of their *formal* concerns, they cannot possibly be concerned with education either. Irrespective of the intentions. ☐

NOTES

1. Bertrand Russell, *The Impact of Science on Society* Blackie & Son, Bombay, 1958, p. 157.
2. Paulo Freire, *Education for Critical Consciousness*. The Seabury Press, New York, 1973, p. 34.
3. Paulo Freire, *Pedagogy of the Oppressed*, Penguin Books, Harmondsworth, 1975, p. 80, Emphasis in the original.
4. Fritjof Capra, *The Turning Point*. Fontana, London, 1985, p. 38.
5. Quoted in *Ibid*, p. 47.
6. Gregory Bateson, *Mind and Nature*, Fontana, London, 1980, p. 231
7. Quoted in Edward Thompson, 'Notes on Exterminism, the last Stage of Civilization' *in* Edward Thompson and others, *Exterminism and Cold War*, Verso, London, 1982, p. 27.
8. Ruth Sivard, *World Military and Social Expenditures* 1985 World Priorities, Washington, 1985, p. 5.

UNIVERSITY NEWS

A Weekly Chronicle of Higher Education

Subscription Rates

	Inland		Foreign	
	Institutions Rs.	Teachers & Students in India Rs.	Air Mail	Surface M
1 Year	80	60	US $ 80	US $ 50
2 Years	150	110	$ 150	$ 90
3 Years	200	150	$ 200	$ 12
5 Years	300	225		

Single Copy Rs. 2.50

Subscription is payable in advance by Bank Dra only in favour of Secretary, Association of India Universities.

Advertisement tariff available on request.

Address Subscriptions & Enquiries to ,

Under Secretary (Publications)

Association of Indian Universities
AIU House, 16 Kotla Marg
New Delhi 110002

MAJOR ENCYCLOPEDIAS & REFERENCE WORKS

Title	Price
Africa South of Sahara 1989	£ 85.00
Blackwell Encyclopedia of Political Institution	£ 45.00
Blackwell Encyclopedia of Political Thought	£ 37.00
Blackwell Encyclopedia of Russian Revolution	£ 35.00
Books in Print 1988-89 7 Vols. Set	£ 250.00
British Books in Print 1988–89 4 Vols. Set	£ 148.00
Commonwealth University Year Book 1988 4 Vols. Set	£ 91.00
Encyclopedia of Philosophy	£ 40.00
Europa Year Book 1988-89 2 Vols. Set	£ 170.00
Far East and Australasia 1989	£ 95.00
Flechter's History of Architecture	£ 48.00
International Who's Who 1988-89	£ 90.00
Jane's All the World Aircraft 1988-89	£ 85.00
Jane's Armour and Artillery 1988-89	£ 80.00
Jane's Fighting Ships 1988-89	£ 85.00
Jane's Infantry Weapons 1988-89	£ 85.00
Jane's Military Communications 1988	£ 95.00
Jane's Weapon System 1988-89	£ 95.00
Middleast and North Africa 1989	£ 80.00
Oxford English Dictionary & Supplements 16 Vols. Set Spl. Indian Price	Rs. 8000.00
Ulrich's International Periodicals Directory 1988-89	£ 225.00
World of Learning 1988	£ 110.00
World Major Languages	£ 35.00
World's Religions	£ 40.00

UBSPD

UBS PUBLISHERS' DISTRIBUTORS LTD.,
5 ANSARI ROAD, NEW DELHI-110002

Branches : NEW DELHI BOMBAY BANGALORE MADRAS CALCUTTA KANPUR
Offices Abroad : LONDON

ACADEMIC REFORMS BY 2000 A.D.

Anand P. Srivastva*

The UGC has been attempting examination reforms in our universities right from the late fifties. This important mission was initiated by Dr. Benjamin S. Bloom, a world renowned specialist, who conducted seminars and interviewed university students all over India and reported that "during the year the typical student spends less than an hour a day on study outside of class attendance...students do not see much need for additional study time during the regular year since the major emphasis is on getting notes from the lectures and checking those notes against a standard textbook. The students are also convinced that they will be held for a memorised version of the subject and that the attempt to learn this material too early is wasted since it cannot be retained until examination time." This finding is fairly indicative of the amount of study that is required to be conducted in the institutions of higher learning in our country and the kind of preparation needed for examinations. Our teachers and Vice-Chancellors are aware of these phenomena which have been ascertained and confirmed by all who have studied the facts. We should not forget that the present day teachers and Vice-Chancecellors also studied in this manner in their own generation, not only that, even their own respective teachers had followed the same pattern which is very much part of tradition. It simply means that our higher education will go on even if the worst happens and the university libraries are consigned to nearby rivers. Carl White has also given the same kind of observation about the University of Delhi. "The hard fact to be faced is that the University of Delhi inherited an educational tradition which treated the library as a conventional and useless accessory. Had the library by some misfortune been suddenly dropped into the Jamuna River during the early years, the loss would have been regrettable but I search in vain for any convincing evidence of daily demands by teachers and teaching assignments which would have caused the academic programme, as then conducted, to suffer from the disaster". There is a great deal of understatement, if not also diplomacy, involved in this observation which restricts itself to the past of the university. The fact is that, except a few departments and a very small number of teachers, this observation appears quite true even in the present day teaching, not requiring use of books as in an academic workshop, for we all know that the absorptive pattern of teaching and examinations, as identified by Benjamin S. Bloom in 1961, is still in vogue in Delhi University as in the other universities of India. The story of higher education for about 140 years in India, from 1857 to the 1980 is dominated by the fact that the student is required to be passive in the learning process.

The new philosophy that all learning is an active process between teachers and students has not yet made a start in Indian universities. There is no need of quantitative analysis and statistics to prove this. All modern thinking clearly and loudly endorses that, "Behind the statistics, behind hard won successes and disappointments is the story of two philosophies in conflict. One view holds that all learning is an active, not a passive thing. It is well illustrated by research in which a mature scholar opens up the wide vistas of the subject, familiarises the student with the tools he must use and then give him an apprenticeship in which the intellectual record accumulated in libraries is used to try out and cultivate his powers to do original work. It is illustrated also by the achievements of many teachers who use the lecture method—teachers whose reading habits and tastes are as infectious as a contagion. teachers who layout the conquest of a subject as methodically as an assault on Everest and who (with or without Tutorials and Preceptorials) guide their apprentices in the use of the instruments of learning and use the examining process to test the student's all-round growth. When higher education is conducted along these lines, the library shares with the lecture room the role of academic workshop and is as indispensable to high academic achievement as the heart is to the mammal.

The other view assigns the student a less active, more absorptive role. It holds that the essentials of academic achievement are authoritative lectures, normally supported by a well chosen list of prescribed readings followed with examinations by outsiders who test not the all round growth of powers cultivated by the great makers of men found in every first rate university—but who test rather the degree to which students have absorbed the information contained in lectures and required readings. Assuming that the student follows the lectures closely and can buy the prescribed

---

**Fellow, Indian Institute of Advanced Study, Rashtrapati Niwas, Shimla-171005.*

texts, the library, for him, amounts to an external accessory to the learning process—like a badge. If it is a great library, it may be a badge of honour and pride, but it would be unjustifiable to finance such a dispensable accessory by calling it the heart of the university."

As the quality and type of teaching-learning processes is the indicator of the use of libraries and books in higher learning, a librarian need to be permitted to look at the details from his weaker but higher platform. In one of my books I said about a decade ago, "the most inexcusable failure of the Indian professoriate lies in not adopting modern methods of teaching and evaluation. Even 'Teacher's Synopsis' fail to be prepared in our universities, students are put in passive roles in learning, and relevant academic literature is not written and published by our professors... The professoriate has to develop the methodology of making our youth and scholar walk together in 'know-how' and productivity with their counterparts in other countries... But there is *no remedy for* the greatest of all tragedies i.e. if the university faculty itself becomes indifferent, which unfortunately is the case at present". Our teachers may know about the subject they teach but not the dynamics of a classroom. We have to carry to them knowledge about the techniques for better teaching and better learning methods by cultivating first in them a strong better reading ability and habit obviously through the library. Presently, the model of teaching and learning is such that a teacher tells and students listen about sacred and sacrosanct courses. It was Joseph Tussman, a Philosophy Professor at Berkeley, who doubted in mid 1960s the utility of this, by arguing that students served by different courses are likery to be disserved by all, because :

(1) The student buys with each fraction of this committed time an even smaller fraction of the teacher's interest. Tussman said, "No teacher is in a position to be responsible for, or effectively concerned with, the students' total educational situation. The student represents himself in fragments and not even the advising system can put him together again".

(2) When about four to six, or more, teachers teach a student in an academic term or semester, they all compete for student's limited time through assignments, creating thereby increasing backlog, which a student copes with by inventing some craft. Tussman calls it, "Strategies of studentship." Burden of numerous assignments creates a series of artificial crises in a student's life, where if a student tries to pursue one thread he drops the other and thus a collection of 'coherent courses' becomes an incoherent collection. Tussman concluded that reasons for chaos lay not in the perversities of teachers and students but in the failure to develop proper organisation of teaching and learning process in higher education.

The course pattern of dispensing curricula both in quantity and quality must be changed in our universities by adopting smaller units, two to three at a time each for about four to six weeks, to be followed by evaluation and then picking up of newer units. The UGC launched two programmes—COSIP in 1971-72 for improving science teaching and COHSSIP in 1974-75 for improving teaching in Humanities and Social Sciences. Objectives were to reduce formal instruction, enhance student participation in learning, introduce tutorials and seminars, adopt internal assessment and improve reading habits, etc. About twenty years have passed and these two programmes have been reduced to mere bureaucratic rituals. The UGC report 1985-86 just gives a descriptive account by giving statistical details of their application in colleges, etc., and no qualitative evaluation has been attempted, as will be apparent in the following texts :

College Science Improvement Programme (COSIP)

The programme initiated by the Commission in the year 1970-71 aimed at bringing about qualitative improvement in the teaching of science subjects at the undergraduate level. The purpose of the programme is to accelerate the capabilities of undergraduate science students and initiate a process of continuous self renewal. This is brought about through an integrated approach comprising simultaneous improvements in subject matter, methods of instruction, *syllabi, curriculum*, laboratory exercise, workshop, library and teaching aids.

The grogramme has been taken up at two levels (a) in selected colleges including the entire science faculty and (b) by way of University Leadership Project (ULP) in one science subject *in all colleges affiliated to a university*. As on 31st March, 1986, COSIP was implemented in 252 colleges and 40 university departments (by way of ULPs.)

College Humanities and Social Science Improvement Programme (COHSSIP)

The objectives of this programme, introduced in 1974-75, are given in the UGC Annual Report for 1984-85. Like COSIP, this programme which is aimed at improving the quality of Humanities and Social Sciences learning is also taken up at two levels, viz., in selected colleges and in university departments by way of University Leadership Project.

Assistance under this programme was provided to 40 Arts and Commerce Colleges and 35 Teacher's Training Colleges during the period under report. The total number of colleges assisted under the programme upto 31st March, 1986 was 401 in the first phase and 74 in the second phase.

The number of university departments participating under this programme remained the same, viz., 10 during 1985-86 as it was during 1984-85. However, during the year, the Panels identified some more departments which could be selected for participation under this programme. These recommendations of the Panels are being examined.

Let brevity be adopted to evaluate this merely descriptive report by saying that such a poor and casual disposal of seminal and metamorphic programmes by a national commission will not be available even in the poorest and the most backward country in the world. The poor quality of analysis by the UGC itself speaks that vital programmes are not progressing properly and the schemes have become just rituals for consuming grants. In these circumstances the UGC will fail to penetrate the *status quo* of telling and listening type of higher education. The plans of the UGC are worked out ignoring global research findings and are executed casually with the result that the entire, investment goes down the drain and so-called statistical figures are reported as achievement. Let us have a look at the achievements of the UGC on the examination reform which it is attempting since last over thirty years. The report for the year 1985-86 incorporated the following :

Examination Reform

The Commission's programme of Examination Reforms is based on the report, "Examination Reform—A Plan of Action" prepared by a Working Group constituted by the Union Ministry of Education. The report was endorsed by the UGC and thereafter discussed by the appropriate university bodies, so that each university could evolve its own plan of action. The Commission simultaneously sponsored a series of zonal workshops to involve the academic community representing different levels and shades of opinion.

The Commission has laid special emphasis on the implementation of certain specific measures leading to examination reforms with a view to improving the reliability, validity and objectivity of evaluation and with a view to bringing about a closer integration of teaching-learning and to make examinations an educational experience. The main emphasis is on (i) continuous internal evaluation, (ii) development of question banks, (iii) introduction of grading system, and (iv) introduction of semester system.

While the above measures have been suggested as a package plan, it was felt that continuous internal evaluation was the most crucial of these reforms. Accordingly, the Commission constituted a working group to prepare the guidelines on continuous internal evaluation. These have been published and circulated to the universities, with the suggestion that the same be placed before academic bodies and concrete steps be taken for the implementation of the various measures suggested in this document. The Commission has also constituted a working group to prepare a monograph on grading system.

The Commission has constituted an Implementation Committee to advise it on various matters for implementing the examination reform programme. Information collected from the universities/institutions deemed to be universities from time to time regarding progress made by them in implementing the programme of examination reforms is also reviewed by the Implementation Committee.

The Commission is providing support to a few selected universities/institutions deemed to be universities towards core staff and other facilities such as workshops, seminars, printing of question banks, purchase of books and equipment, contingencies, etc., on 100 per cent basis for establishment of Examination Reform Units within an overall ceiling of Rs. 75,000/- per annum besides actual expenditure on core staff. The grants paid to these universities/institutions have enabled them to introduce specific measures of examination reforms and to monitor the programme. At present 10 universities and 3 institutions deemed to be universities are receiving assistance from the Commission towards establishment of Examination Reform Units. Proposals of 16 universities and one institution deemed to be university for financial assistance towards establishment of Examination Reform Units are under consideration.

According to information available with the Commission, continuous internal evaluation at different levels is being carried out in 41 universities, 11 institutions deemed to be universities and 22 agricultural/technological universities. Question banks have been or are being developed in 21 universities, two institutions deemed to be universities and two agricultural universities. Grading system is in operation in 18 universities, 8 institutions deemed to be universities and 19 agricultural/technological universities and the semester system is being followed in 46 universities, 10 institutions deemed to be universities and 15 agricultural/technological universities.

From this report once again we are not able to find out the quality of reforms and the results of battles being fought in our universities. Can we not know how certain countries have transformed their examinations and how they promoted learning over decades to reach the present shape. After all, they were also in the same state about a hundred years ago as India is today. The story and stages of the transformation of their higher education rested on the following concepts :

(1) Instead of about 3 to 4 broad papers and courses a year they worked out about 10 to 15 smaller units and conducted about 2 to 5 at a time, teachers evaluated their students fully and finally after about four to six weeks of learning together largely through assignments, discussion and seminars. Students also had the chance of studying their evaluated works and also commented on the teachers effectivity.

(2) The teachers had the synopsis of their courses which students got on the first meeting and each one regulated his efforts for learning the short courses through classroom, library, books, group discussions and consultations with teachers.

(3) The teacher kept his eyes on the progress and conduct of each student and exchanged his views about students' efforts with other faculty members.

(4) The teacher remained busy in his own research and continued learning, produced books, papers, etc., to form the corpus of growing knowledge. Publish or perish became a style in his life. The library became the workshop for teachers and students in absence of which academic functioning would stop.

Have these four features emerged in any of our universities as a result of implementing examination reforms ? If not, what have we been exactly doing for over thirty years ? In all these projects of the UGC, the student had been the main focus of attention. All ranks suggested what a student should do, how he should do it; What Joseph Tussman said about the 'strategies of studentship'. We also largely ignored the continuing educational requirements of Vice Chancellors and the faculty. No courses were conducted for updating them and for supplementing the gaps of generalised nature concerning higher education. Any Vice Chancellor and/or a professor would have loved to learn about the concepts like, 'group processes', 'problem posing education', 'individualisation in learning process', 'value of modularisation, etc., in a seminar given by experts on these areas including foreingers By placing our emphasis on what student should do we are chasing a phantom and so get poor returns. The right course to follow seems to be the continuing education of Vice Chancellors and teachers on new strategies and methods. If those in authority are properly equipped and updated, students will automatically get updated. An input of new knowledge in teachers and Vice Chancellors will magnify the returns of the UGC grants. The plea stands supported by Suma Chitnis, who describes the state of continued and current scholarship of teachers in her recent study on the Bombay University teachers.

Continued and Current Scholarship

With respect to Continued scholarship as evidenced in the respondents' reading habits and their contribution to their fields, the picture is even more disappointing. Asked to state whether they read regularly (the question actually asked was whether they read daily), most of the respondents (84 per cent) replied that they do not read regularly in order to equip themselves to handle the syllabi they teach. Only 16 per cent mentioned that they read daily; questioned whether they use their vacations for study towards the courses or syllabi they teach, as many as 91 per cent of the respondents said that they do not.

Asked to state whether they have ever written any professional articles, papers, textbooks, etc.

other than their Master's or Ph.D. dissertations, a large percentage of the respondents say that they have written nothing (39 per cent). Twenty six per cent claim to have written light journalistic articles or book reviews. Ten per cent mention examination-oriented textbooks. Only 25 per cent say that they have contributed papers to professional meetings, seminars or journals.

The data on the impressions that the respondents hold of each other's scholarship are even more damaging to their image as scholars. Barely 13 per cent of the respondents believe that more than 50 per cent of their colleagues continue to be good scholars after they take up teaching as a career. In fact, as many as 40 per cent believe that less than 50 per cent of their colleagues continue to be scholars. A more specific breakdown of the responses is as follows :

Those who believe that less than 5 per cent are scholars	Those who believe that less than 20 per cent are scholars	Those who believe that between 20 and 50 per cent are scholars	Those who believe that more than 50 per cent are scholars	Total
40%	36%	11%	13%	100%
(69)	(61)	(18)	(23)	(171)

What is happening with the teachers of the Bombay University is not a rare phenomenon. It is prevalent all over the country. For a characteristic so common and universal, research studies are not required to prove the point. Yet let us consider what A. Jha reports in his survey results on reading habits of the teaching faculty members of the prestigious University of Delhi. Jha reports that "reading seems to be a rare hobby and that nine out of every ten teachers confessed that they read nothing except the textbooks". Can someone invent ways and means to make students read and learn extensively, if Vice Chancellors and teachers themselves do not read, or are not required to read and continue to learn ? Such ways and means do exist in the Indian higher education through examinations and the end of a year for which students have to do some reading but more of memorisation. The misfortune is that the ablest of this species becomes a university teacher and a Vice Chancellor in the system in due course.

If students are doing what Benjamin S. Bloom has reported and teachers are doing what Suma Chitnis and Jha have found out in their research, where is the need for using books and libraries ? Yet it is the libraries and librarians, devoted to some real innovation in the teaching-learning processes, who can transform the poor quality of higher education into something better. It is not merely the librarian in me who suggests this, or a librarian's philosophy alone; this is the story of Western scholarship where libraries have really made a unique place for themselves in the teaching-learning process and have thereby transformed higher education.

Why are we continuously failing in achieving goals in respect of examination reform and improvement in teaching-learning processes ? Is it because instead of attacking and handling the whole we are tackling just the one or a few parts of complex phenomena ? What could be the whole in this sector ? Could it be something like the following series :

(1) Cultivation of proper learning skills, on which reading habit depends, when students enter our universities and colleges. It was a good opportunity to introduce "synergy" courses in our colleges when the 10+2+3 pattern provided 1/3 extra time to universities and colleges, i.e., the plus three sector by shunting down to secondary stage (i.e. plus Two) one third portion of the syllabi of the earlier three years programme for bechelor's degree. A little arithmetic will show that in late seventties we added to our university and college life two additional long years of much hated spurious telling—listening type of teaching—one by plus action at the top in the shape of M. Phil courses; and another by minus action of shunting down one third part of the bachelor's degree university courses to the second year of +2 at the secondary school. How have we utilised these additional two years ? It is a contradiction that we introduced a paper on 'Research Methodology' in M. Phil which means that our students earn bachelor's and master's degrees without knowing the methods, ways, lanes and tracks of self-academic searching on academic assignments. If we look at the European and North American scene we find that these skills are cultivated at school level and grow qualitatively at college by doing assignments, tutorials, seminars and writing of papers, etc. Research method is not a new variety altogether so as to crop up at post-Master's level. It must have rolls below. Our Vice Chancellors, professors and peers in the UGC fail to realise the obvious and general feature that teaching and preparations for the first

degree should escort a student to the frontiers of knowledge and to the threshold of the world of research and the second degree, should be able to plunge a student actually into research work for life. Our students feel frustrated by the dominance of repetition, at various stages, of the same elements of curriculum, the boring teaching and their passive state in a degree earning game.

Even now, we can start 'Emergency wards' in our colleges and universities devoting about six months in cultivating learning skills in our new entrants through synergy like programmes and help them to develop—college learning study methods, reading skills, writing skills, thinking skills, discussion skills, teamwork skills, etc.

(2) Courses for teachers on Teaching-Learning Processes. In the history of mankind it has taken several centuries to shift the focus on pedagogy from teaching to learning. This process of change is nearly complete in many countries. With us, what to say about adopting of 'learning processes' even the discarded process of teaching (in true sense) is absent at college and university level. Only the anuual examination-spirit is omnipresent. Over decades the making of a faculty member has been faulty in our country. The teacher-in-making becomes highly specialised in his Master's and Ph.D. studies and at the most develops ability to contribute only to 'specialised knowledge'. His total culture is within a narrow scope. He acquires no knowledge to make and develop a full man out of an adolescent. This incomplete academician is generally inclined to withdraw from broad academic and social programmes and activities. He in turn only endeavours to produce 'micro' specialists and the cycle goes on. The UGC has recently established some fifty academies in the country to help our college and university teachers to grow as full academicians. Let us hope the following concepts will be included in their curricula and deliberations :

(i) Explicit Teaching-Learning Processes,

(ii) Thinking while learning and 'clinical evaluation',

(iii) Difference between "Topics to Teach" and "Topics to Teach with",

(iv) Techniques of Tutorials and Teacher-Pupil interaction, and

(v) Skills for Communication, investigation, human relations and information management.

It is through grooming of teachers on these areas which alone can provide for internalised changes in higher education; otherwise we will continue with our matinee-shows of structural changes through 10+2+3 grades, in place of numbers and semester system in place of teams, etc. Monitoring of this scheme through objective inputs, may be through engaging a foreign specialist for two to three years, will pay better dividends, or else it is likely to become one more ritual. The Ministry of Human Resource Development should play a collaborating role with the UGC in the implementation of this project because keeping in view its earlier records, the UGC is likely to fumble here too.

(3) Formation of Short Courses

The academic councils of all the universities be requested to develop about 15 short courses under each department and each should be finally dispensed in about four to six-weeks. We can acquire models from foreign universities and adapt them according to our requirements. Study of models will help us to develop the know-how and the much needed confidence. Foreign Educational Foundations and local IITs may also be requested to help us in this respect.

(4) Granting the Teacher his Natural Right to Evaluate

No society can really afford to distrust its teachers. This is also against the ancient Indian tradition which we value so much and often too much. As various Public Service Commissions conduct their own examinations and the private sector knows well how to identify talents, there will be no major harm if a little dishonesty and favouritism in testing show up their heads here and there. There human weaknesses may be present even under the present system; after all external examiners are not really unidentifiable. We should believe that bestowing of responsibility does bring with it some discipline. Then, there are fairly foolproof ways of coordination and checking by the staff councils, faculty structure and the university as a whole. We can also use the examination branch to work as inspectors in certain categories of foul evaluation. Lastly, opening of evaluation results for study by students will gradually standardise all details. We have to launch it immediately and be ready to regulate all the problems that may crop up from time to time. Now or never should be the style of launching it for the sake of the survival and the quality of higher education as the pattern of evaluation by the teacher concerned is going on successfully in numerous countries.

This pattern has to emerge in India like the goddess 'Athena' appearing full-grown. There may be no half-way or mixed approach formula available for uprooting an evil which is perpetuating since last about 150 years. It has to be stopped like the practice of 'Sati' at one stroke. Momentum can be acquired in this plan, as is the common practice in modern times, if the Prime Minister as a follow up action on the Education Policy, 1986 and on the briefing of the Minister of Human Resource Development and the Secretary of the Ministry, addresses the assembly of Vice-Chancellors, in a mood of and approach for obtaining quick results. Could a bit of the posture of anger help in this case, needs also to be examided. In any case about thirty years of lingering, input by so many commissions and committees, formulations of numerous 'Policy statements', expenditure of billions of rupees and what not, have so far given very poor results. Sir Eric Ashby says that so many high level infections (and life-saving drugs) have failed to make Indian higher education to stand up. Numerous friendly and sympathetic international experts have withdrawn from the educational scene of India due to a feeling of frustration which is worst of all disappointments.

The most important suggestion that should be offered in this analysis is that we adopt the style of going the wholehog covering—cultivation of learning skills, formation of curriculum in smaller units, adopting modern teaching-learning processes, periodic evaluation by teachers giving courses in units and continuing education requirements of the Vice Chancellors and teachers. If we don't go the wholehog and continue to handle separately improvement of science teaching, teaching in the social sciences and the humanities, examination reforms, etc., we are not likely to achieve our goals, in what to say of 20 to 30 years already spent, even if we spend a hundred years. Also, attacking the examinations alone is theoretically not feasible, because it is the fag end of the earlier process and is totally dependent on the details of the earlier processes. How can any resultant factor be modified or changed without modifying or changing the resulting factors which provide the synthesised form of the resultant factor as the end product ? Has the UGC been unware of this fundamental logic ? How long the nation could remain ignorant of it ?

Fortunately, about fifty Teachers' Academies are now existing in the country for the basic and continuing education of university and college teachers and how wonderful it shall be if a few programmes are also organised for the Directors of these academics and the Vice-Chancellors. The full and proper knowhow should be made available to these academies otherwise the bad currency is likely to capture them and will convert the affairs into showful inaugurations and valedictory functions bridged by spurious talks by the familiar speakers and by some mid-day sleep for the participants. The relevant information may not get disseminated and quantitative reporting as usual will take place in the UGC documents.

REFERENCES

1. Chitnis, Suma and Altbach, Philip, Ed. Indian Academic Profession : Crisis and change in the teaching community. Delhi, Macmillan, 1979.
2. Jha, A. Reading Habits of Teachers of University of Delhi. *Times of India*, 11 December, 1977.
3. Srivastava, A.P. *Pathology of Higher Education.* Kanpur, Reprint Publishers, 1979.
4. UGC Committee on Examinations Reforms. *Evaluation in Higher Education : A report*......under the leadership of Dr. Benjamin S. Bloom. Delhi, UGC, 1961.
5. White, Carl M. *Survey of the University of Delhi Library.* Delhi, University of Delhi, 1965.

Maulana Abul Kalam Azad
India Wins Freedom

The complete version of the book which include the 30 unpublished pages is now available. Not only have all the words and phrases of the original list been reproduced; the origional tone and temper have been fully restored. The text now reveals that the controversy that has simmered for so long about the hitherto unpublished pages was fully justified.

Many of us may not agree fully with Maulana Azad's forthright views on persons and events of the period (1935-48) but we shall be compelled to admire anew the honesty and courage of a great son of India.

Hardbound **Rs. 125.00**
Paperback **Rs. 75.00**

Orient Longman

Regd. Office : 3-6-272, Himavatnagar
Hyderabad 500020

BOMBAY CALCUTTA MADRAS NEW DELHI
BANGALORE GAUHATI HYDERABAD
LUCKNOW PATNA

School of Planning and Architecture

(Deemed to be a University)

4, Block-B, Indraprastha Estate, New Delhi-110002

The School of Planning and Architecture had a modest beginning in 1941 as a Department of Architecture of Delhi Polytechnic. It was later affiliated to the University of Delhi and integrated with the School of Town and Country Planning, which was established in 1955 by the Government of India to provide facilities for training in Rural, Urban and Regional Planning. Recognising the specialised nature of the fields in which the School had attained eminence, the Government of India, through the Ministry of Education and Culture conferred on the School of Planning and Architecture the status of a Deemed to be a University. This new status enabled the School to broaden its horizon by introducing new academic and extension programmes, promote research and award its own undergraduate and doctoral degrees. The School offers courses in Architecture, Urban Design, Architectural Conservation, Urban and Regional Planning, Housing, Transport Planning, Landscape Architecture and Building Engineering and Management, some of which are offered by no other institution in the country. As an extension of its various programmes related to human settlements the School has also established Centres for Rural Development and Environmental Studies.

LIST OF PUBLICATIONS

1.	"SPA JOURNAL". Quarterly Journal of the School Annual Subscription :	Rs. 80.00 (Inland)
*2.	HOUSING AND COMMUNITY IN OLD DELHI By H R. TRIVEDI Published for the School By Atma Ram & Sons, Booksellers, Kashmere Gate, Delhi-110006.	Rs. 55.00
*3.	CYCLONES & BUILDING BEHAVIOUR By S K. NARAYANA Published for the School by M/s. Badua Press, R-9, Inderpuri, New Delhi-110012.	Rs. 80.00
4.	ENVIRONMENT, SHELTER & NETWORKS edited By K.B. Suri	Rs. 80.00
5.	CONTEMPORARY ARCHITECTURE OF DELHI edited By P.A. Dasai et al.	Rs. 26.00
6.	URBAN DEVELOPMENT PLANNING STRATEGIES & TECHNIQUES By N.S. Saini & Mahavir	Rs. 30.00
7.	INTEGRATED DEVELOPMENT PLANNING FOR A WATERSHED By N.S. Saini & R L.P. Sinha	Rs. 150.00
8.	JANTAR (A Souvenir Publication)	Rs. 10.00
9.	URBAN & REGIONAL PLANNING INFORMATION SYSTEMS FOR INDIA/OTHER ESCAP COUNTRIES edited By N.S. Saini	Rs. 400.00

*Copies of Item No 2 & 3 may kindly be ordered directly from the publishers.

For other publications please write to :

Documentation cum Publication Officer
SCHOOL OF PLANNING AND ARCHITECTURE
I.P. Estate, New Delhi-110002

***Trade Discount offered**

Communication and Higher Education

An Interface for Rural Development

K. K. Bajaj*

Indian society continues to face numerous challenges and dilemmas in its process of rural development. While education is an agent of change, its role in developing and underdeveloped countries has been significant. As an important input, the content of education determines not only the accelerating pace of change but also the level of social awakening and transformation. In infusing confidence essential for building a dynamic and cohesive community, it plays a decisive role. Ordinarily, education is a process of acquiring knowledge by formal instruction, training, learning and understanding. In its vital application it has to be the preparation for life. It means training of mind and character besides improvement of mental equipment. It is, therefore, imperative to look at the nature and concern of education in its role in development. Through cultivation of ideas, attitudes, values and capabilities, both towards knowledge and skill, it provides strength to people to create a new social environment to enable them to contribute towards development. Development of human resource is, therefore, the main function of education.

Development in itself continues to be a very illusive concept connected with various social and economic variables. It is no longer being conceived merely in terms of economic growth but is regarded as communitarian process where the individual is respected and where the value of cooperative efforts is appreciated. Social justice is as important as economic development. Therefore, development takes care of all-round process touching social, political, cultural and spiritual aspects of the person and the community. Development, in short, means social improvement and better appreciation of human values. In a technical sense, it refers to qualitative and structural changes in the set up of national economy. For a conceptual and comprehensive study of development, it is necessary to compare it with growth which only refers to quantitative and tangible increase in Gross National Product (GNP). Growth may take place due to spurt in economy following rich harvest after timely rains, changes in our internal market price behaviour and many other contributory economic factors. Development, however, refers to a relatively stable long range in real income that is accompanied by change in attitude through institutional set up, production techniques, outlook, etc. Development in another sense means either the optimum utilization of available resources or their enrichment. In this context, human resource occupies the most important place.

Higher education in its content, quality and functional role is the serious concern of any forward looking educationist, social anthropologist, planner or rural economist. It is the common factor which underlies development. Though there may not be any democracy in the domain of intellect yet a democratic approach has to be there in attempting how best education can be used as an instrument of manpower planning in a fundamental sense. It has to attempt the establishment of a social order, that is based on equal opportunity, peace, amity and understanding. The preamble of higher education has to be the fulfilment of social aspirations through a coordinated understanding of human values and proper utilization of national resources. It is in this context that education has to act as a catalytic agent of change.

With the population and information explosion, especially in the developing countries, the role of effective communication tools and technology can be seen to have taken over a large part of educational workload. It is undeniable that learning is acquired through viable communication channels. While education strategies have to deal with inequality and the disadvantaged in a society, the deprived sections of society and the children of the working classes, the nouveau riche and the rural poor, the motivation to learn, so that the learning contributes to development, is the direct function of effective means of communication. Effective communication strategies enhance the reach of education and enrich its quality vis-a-vis dynamics of expansion, social change and our requirements. Education today is not merely confined to the portals of institutions of higher learning. With Open Universities and non-formal systems of education, it is now being brought closer to every person. It is constantly experimental and innovative in its application and approach so as to

---

**Dean of Colleges-cum-Director, College Development Council, Himachal Pradesh University, Shimla-171005.*

make up the information deficit in society particularly in developing countries which are being seriously challenged by the possibilities of new technology.

Communication Strategies

Benefits of education have started reaching the remotest corners. To make this exercise more relevant, communication planning has assumed importance. At the international level communication has overtones and connotations akin to gamesmanship indoctrination, information overloads, strains and at times creation of distorted images. Communication is even correlated to culture, social requirements and constraints. However, in a society where education is the means for rural development, communication has a different significance. In an age of technology and innovation where education is extending its reach through experimental and psychological means, communication has to have a definite strategy which should neither be the classroom approach of the use of television or radio nor of any questionable ineffectiveness in the field. Communication strategies can comprise a package of radio and television programmes with full informational support, posters and graphics with easy and sharp social messages, cinema scripts of communicative nature, agricultural extension programmes devised to tickle the sensibility of ignorant farmers so as to motivate them into adopting new tools and technology of agriculture, textbooks to arouse interest in learning, and traditional entertainment to sensitise the village folk. Even adult literacy programmes and kits have to contain certain such functional literacy packages as could sustain the interest of rural folk. Radio and television agricultural programmes have to arouse greater interest and awareness towards soil behaviour and technical knowhow. In the economic packages of these programmes, *small savings, family planning, afforestation, etc.*, have to be emphasised. The people have to be educated about the preservation of environment, wildlife and family health.

In a country like India with an illusive cultural mapping means of communication have to be correlated to area specific needs and community consciousness in the rural context. The mass media programmes with an entertainment thrust and commercial overtones are not even accidentally beneficial. In fact, such programmes further disadvantage the disadvantaged. Such programmes may even hurt the sensibility of our backward people. While mass media can adversely influence the creativity of children, the visual and aural effects of television can be utilized to impart better education to our youth in our villages to exploit the rural potentialities for overall development.

India is a land of villages with a rich rural potential and landscape. There are 5.76 lakh villages and 93.3% of the inhabited land has a rural base with the average population of a village as 910. We have an agrarian economy in terms of which the development of the country is measured. Ignorant and uneducated people, though possessed of material gains and power necessary for production of wealth account for development. Their backwardness and poverty of approach continue to be correlated to lack of education and ineffective communication system to realise their potential and channelise their faculties. The development of mental attitudes which is accomplished by positive role of education, suffers on account of non-availability of proper packages of information beneficial to them. It is perhaps for this reason that the well known economist Marshall has emphasised a full and systematic construction of noneconomic variable called education in economic development. Development is a part of life process even though it depends upon a number of factors which influence it in different ways and degrees. Sometimes rural development is simply construed to mean agricultural development in its complements such as land, labour, loans, seeds, fertilizers, irrigation, power, marketing strategies, etc. Even if it be so, education with proper communication tools brings about the agricultural revolution which is a part of rural reconstruction These components bring about the social transformation which accounts for development.

In looking to future, it is the capacity to learn new techniques and then to translate them into action, that will determine, perhaps, more than anything else, or any other single factor of production, the viability, autonomy, integrity and development of the country. The constraints of population, the spurt of developmental changes in life style, cultural and value *changes, have all to be understood in correlation to* our rural setup. While rural schooling may first attract the attention of a responsible government through formal education and through elementary schools, secondary schools and other institutions of higher learning may include efforts of the formal students to learn through these agencies. Education would embrace all activities that supplement the level of comprehension at all levels and in all groups. This may include education at home and all other forms of education. The impact of higher education becomes significant in the context of such variables as socio-economic background of our rural masses, demographic composition, child labour, agricultural implements, credit requirements of labourers and farmers, parents' perception and of course, the much required awareness of its use.

Benefits of Education

With the ever increasing emphasis on economic benefits of education, we have also to be conscious of its materialistic overtones. The institutions of higher learning have to beam their programmes in the direction of creating human capacity, more distinctly in the agrarian setup which can be identified, for a more confident preparation to accept the future challenge. This may not be qualitatively identifiable and tangible, yet the impact of education on life style of the people would give sufficient evidence on its having reached the people. Education has its impact, whether good or bad on the rural people, because they start from the start of civilisation in many ways. This brings them information with which their mental horizon changes, political awareness improves, and the status quo undergoes change. In the underdeveloped and developing countries the flow of information through education is transforming the entire approach of the mass of humanity towards understanding the basics of life. A new awareness towards health, values of life, socio-economic compulsions, and will to preserve cultural heritage emerges. While education may cultivate the art of innovation and invent new strategies of existence, yet it would add a new dimension to the cultural ethos of society to survive.

Becoming subject-specific, Indian society with a rural base is known to have been wedded to appaling poverty. In retrospect, it has meant exploitation, ignorance, remoteness, illiteracy, ill-health, agricultural backwardness, and inaccessibility. It means ill-schooling and ill-advised and obsolete methods of farming. In other words, shackles of poverty have contributed to the complexities of our rural backwardness and made the progress difficult and daunting. The gap between the 'haves' and 'havenots' has grown enough. The sole endeavour of education is aimed at bridging this gap. This means the augmentation of the capacity of our people in our villages for greater participation in the national mainstream. In this endeavour education seems to be merely an attempt to hit the moving targets. But nonetheless education has its leavening role in bringing about social transformation. It has the power and capacity to consolidate and integrate the masses for the national and common gains. While our primary schools may be compared to our primary industry, the institutions of higher learning can disseminate knowledge in such a manner as to bring out finished products and contribute in establishing a dependable fund of human resource. The New Education Policy (1986) has rightly laid emphasis on extending the facilities of education through numerous open institutions, innovative strategies and academic packages to our rural sector and in this direction it undertakes to restructure national system of education. The policy aims to view education as a dynamic agent with inherent capability to enable the future generation to internalise new ideas, constantly and creatively. A key emphasis in the new education policy is on the creation of human resource at different levels of economy, recognising that this is needed as the substrate on which research and development in all areas of scientific, technical and rural activities should be nurtured, thus leading to the ultimate objective of national self-reliance. The view constitutes a holistic approach. Correlating it to the rural context, democratisation of education is the appropriate step in the right direction. More precisely, the process has to be from information to knowledge and from knowledge to wisdom. In the process of social change this is the journey that our rural folk have to undertake in order to usher in an era of overall development.

Rural Development

Rural development as a consciously contrived programme came to be recognised only in the post-war years. Historically, it had numerous eras andex periments from slogans and philosophical theories of idealists down to the farm workers who had really brought about rural development. We had the Sarvodaya experiment touching the heart of villagers and motivating them into development. Tagore invoked holistic environment of rural set up to emphasise the role of education for improvement of life at grassroot level. Numerous formal projects and schemes including national extension service scheme were launched to educate the rural masses about the role of their effort in bringing about national development. The rural reconstruction programme was added as an adjunct to this. Gandhiji was a pragmatic exponent of rural development through khadi. His famous saying "Political freedom without economic freedom would be meaningless" stirred the soul of our rural sector and brought rural development into limelight under the banner of Swadeshi and Khadi, generating mass employment base in all villages. In Nehru's era accent on agriculture, Panchayati Raj and rural reconstruction besides the growth of cities in India ensured rural development for generating surpluses to sustain our independence. Against the Gandhian and Nehruvian philosophy and concern for rural development green revolution overtook the country with a direct interface with education through scientific experiments and innovations such as of hybrid seeds, multiple cropping, fertilizers, high yielding varieties, mechanised cultivation, reaching our villages besides credit schemes, marketing facilities and link roads. This was prefaced by Antodaya Programme i.e., unto this last approach reaching the lowliest in our villages. The programme of Integrated Rural Development, earlier called Community Development Programme came to emphasise poverty elimination and employment generation. It made significant strides in the development of rural poor. Small Farmers Development Agencies brought about the *benefits of education close to the people. Despite the* majority of colleges in the urban sector, the will to seek education proved the changing realities of our social milieu. The gains of education have been perceptible. The entire mass of technological knowledge has now become available to our rural folk. This pertains to animal husbandry, horticulture, handicrafts, handlooms, cooperative experiments, credit facilities, warehousing, health programmes and soil improvement. Subject-specific studies came to be undertaken relevant to rural development. The laboratory experiments have reached our farmers through vast extension programmes of our agricultural universities to break the barriers of caste system, ignorance, backwardness, poverty, primitive methods of cultivation besides structural imbalances of rural society arising out of people's resistance, non-cooperation and lack of motivation. Education has created the required awareness to bring about the social change in accepting these informative packages contributing to rural development through proper means of communication. In our fate oriented society education has brought about a radical change so as to make it work oriented. The whole change has been rather slow but the change is now sure enough to survive and ensure a promising rate of development. The *educational programmes coupled with informative* inputs have yielded results in alleviating poverty and banishing orthodox beliefs.

Thus it can be seen that while development is a social phenomenon, the role of education to accelerate its pace and enhance its reach cannot be undermined. In fact, education has been the prime-mover in this direction and coupled with effective communication strategies it is the only vital instrument of rural development. We remain linked to it. The mass of humanity living in the villages is able to join the mainstream of our social advancement only if our educational programmes are carefully targetted to rural development and are periodically monitored in terms of their interaction with our rural folk and their active participation in these programmes. □

Macmillan India Limited

Committed to High Quality Publishing!

Macmillan India over the years has been serving the needs of the Indian academic community by a continuous and ongoing commitment to publishing standard texts and reference books both at School and Higher Education levels

Now Poised for Unprecedented Growth in Higher Education Publishing!

After having developed a prestigious list of titles in Social Sciences and Humanities, we have now embarked upon an ambitious programme of considerably strengthening our list in Sciences, Engineering & Technology, Computer Science, Mathematics, Management and Commerce.

Watch out for our new titles keeping pace with changing needs and emerging trends!

M

Macmillan India Limited
Editorial Office: 2/10, Ansari Road, Darya Ganj, New Delhi-110002
Branches at Madras, Patna and Jaipur

EDUCATION IN HUMAN VALUES

T.K.N. Unnithan*

I

VALUE EDUCATION AND THE NEW EDUCATION POLICY

On Value Education, our National Policy on Education states in part VIII paras 8.4, 8.5 and and 8.6, that :

> "The growing concern over the erosion of essential values and an increasing cynicism in society has brought to focus the need for readjustments in the curriculum in order to make education a forceful tool for the cultivation of social and moral values."
>
> "In our culturally plural society, education should foster universal and eternal values, oriented towards the unity and integration of our people. Such value education should help eliminate obscurantism, religious fanaticism, violence, superstition and fatalism."
>
> "Apart from this combative role, value education has a profound positive content, based on our heritage, national goals, universal perceptions. It should lay primary emphasis on this aspect."

Yet it is not for the first time that our government or our educational experts stress the importance of value education. The Gandhian philosophy of education and the principles of basic education are value based. The University Education Commission (1948) headed by Dr. Radhakrishnan, the Secondary Education Commission (1952-53) headed by Dr. A. Laxamanaswami Mudaliar, the Education Commission (1964-66) headed by Dr. D.S. Kothari, the Committee of Members of Parliament on National Policy of Education (1967) and the University Grants Commission through its policy frame on Development of Higher Education in India (1978) have advocated the need for value education. Further, the University Grants Commission (UGC) has been making consistent efforts to create an academic consciousness suited to value oriented education. The UGC's view on the matter is well reflected in the recommendations of the conference of Vice-Chancellors of Indian Universities organised by UGC in Delhi in May 1984 :

> "Value orientation should be the primary objective of education at all levels. Since the objective of education has to be, primarily, the development of the personality of the individual so that he or she may play a meaningful and effective role in the development of the society and the country, it has to be value oriented. Value oriented education should not be equated to moral education, it has a wider connotation and includes values of physical education, vital education, mental education, aesthetic education, ethical education, spiritual education, etc. Value orientation does not merely imply an intellectual discussion on the theme of value as an integral part of the syllabus in various disciplines, but also the practice of those values in the day to day life by the students and teachers. The group, therefore, recommended that besides including value oriented subjects in the foundation courses at the first degree level, attempts should be made to introduce value oriented concepts in all subjects of studies. The Group further emphasised that steps will have to be taken to introduce value oriented concepts as a part and parcel of the life of the individual in primary and secondary education and even teacher education. It should also form an important component of the continuing education programme. Value oriented education should particularly include subjects like International Understanding and Peace, Human Rights, Knowledge of India and Indian Culture, Indian Values and National Heritage."

Since then the UGC had helped organisation of two conferences of Vice-Chancellors—one at the University of Rajasthan (Jan. 1985), Jaipur and the other at the Sri Sathya Sai Institute of Higher Learning, at Prasanthinilayam (Sept. 1987) to consider ways to promote value-oriented education. Both these conferences were also supported by the Association of Indian Universities.

The National Education Policy embodies the aspirations of a national consensus to infuse values into the contents of our educational inputs. While explicitly value education is indicated in the new education policy as mentioned in part VIII paras 8.4, 8.5 and 8.6 and references to it are made in part I, paras 1.4, 1.14; Part II paras 2.2; Part III paras 3.4, 3.5, 3.6, 3.7;

**Former Vice-Chancellor, University of Rajasthan, Jaipur.*

Part V paras 5.13, 5.26 5.42; Part VIII paras 8.1, 8.2 8.3, 8.15, 8.18 and part IX para 9.3, implicitly it is emphasised throughout the Policy Statement. Thus the entire new education policy in a way is a declaration of our intention to make our educational system value based.

Inspite of the importance that the New Education Policy attaches to Value Education it is likely to remain a pious paper plan and our aspirational outbursts empty rhetorics, unless we are in a position to undertake with determination effective measures to implement the policy decision at all levels.

II

URGENT NEED FOR VALUE EDUCATION

Contemporary Indian situation witnesses ambivalence if not complete confusion of values. The character of the Indian has degenerated to such an extent that our social workers, enlightened citizens and statesmen who are concerned about the future of our country have been giving alarm signals and calling for immediate remedial measures. Such warnings and exhortations do not seem to have made much impact on our efforts to take urgent steps to improve our character and build a New India.

As on December 8, 1987 there were 95 sitting members of our Parliament who were guilty of unauthorised occupation of government accommodation to which they were not entitled. Of these 70 belonged to the ruling party, Congress I, and the rest to the opposition. The Shankaracharya of Puri is all for glorification of the henious practice of Sati for which he maintains that he has the support of ancient Hindu religious texts. While another religious leader Swami Agnivesh repudiating the claim of Hindu religious sanction, led on December 8, 1987, a padayatra along with other sadhus to Deorala where a Sati was committed recently to protest against the practice. While the Dharma Raksha Samiti, an organization consisting primarily of Rajput youths wielding swords in their hands in public, conducted a campaign to protect the practice of Sati, the Government took only half-hearted measures to prevent the occurrence and glorification of this hoary practice, as for political reasons it was afraid to antagonise the orthodox sections of society, particularly the Rajputs and the powerful Agrawal community which owns the multicrore Rani Sati Temple complex in Jhunjhunu and other places of Sati worship. Gandhiji called Sati 'a barbaric practice developed out of superstitious ignorance and egotism of man' (*Young India*, 1931) and thus condemned it vehemently. Yet after 40 years of independence the practice of Sati has been allowed to linger on by the government of the very party that seeks inspiration and support from the teachings of Gandhi. This pertains not only to the practice of Sati but in regard to almost all teachings of Mahatma Gandhi. Whether it is in regard to the practice of child marriage, untouchability, poverty, basic education, national integration, national self-reliance or non-violent social reconstruction, our practice has been and is far from our declared intentions. In a country where a non-violent movement led by Mahatma Gandhi could win its freedom from the mighty British Empire, non-violence has almost become a forgotten concept. Violence now reigns supreme in all walks of life. Violence of all kinds in all segments and levels of our society has become the order of the day. The present day youth, egged on by anti-social elements, display their faith only in violent behaviour indulging in terrorist activities or resorting to violent riots and demonstrations burning of buses, destruction of property, and similar actions to achieve their goals. The caste system still dominates the Indian social scene and reinforces the values of social inequality and social hierarchy and distorted values of dignity of labour. Social discrimination on the basis of caste and sex continues unabated, conspicuous consumption and vulgar display of wealth put to shame all our claims of efforts to eradicate poverty and suffering. In short, India of Gandhi's dream has become a country of violence, bribery, corruption, nepotism, adulteration, smuggling, hoarding and social vices of all kinds. Far from being a spiritual heaven, India has become one of the most hardened materialistically oriented societies in the world. Money power has taken over moral power. It has become a common belief that those who have money can get anything done in India, can get out-of-turn admissions in schools and colleges, get jobs without requisite qualification, get transfer to places of one's choice, can secure promotions even if one does not excel in work, can get railway reservations over others, get criminal cases dropped, get exempted from punishment and fines, evade income tax, buy bridegrooms and what not. A stage has been reached when almost anything can be secured through money, even Godly favours and Godmen's blessings seem to be available only for the moneyed. The root cause of this galloping corruption, is the self-centred politician who is concerned more with himself than with the society. The huge election expenditures of candidates of various political parties alone give a clue to the ever-expanding spiral of corrruption. Why would or how could an MLA or an MP spend so much money in his or her election, unless he or she was sure of getting a return of multiples of his election expenditure once he gets into the assembly or parliament ? This political corruption has so penetrated and corroded our entire social fabric that an average Indian has become a valueless, characterless ego-centric brute devoid of any concern for the rest of the society or for high values of life. It would become impossible to stop this fast developing degeneration of Indian social order unless immediate remedial measures are undertaken. However, the contemporary social scene and its *pathetic manifestations have aroused the consciousness* of our enlightened citizens, which provides a ray of hope. The following quotations are from three articles that represent the concern of the civic conscious society oriented Indian intelligentsia:

1. "Gandhiji would not have counted the progress we have made in many fields as subjects of self-congratulation today, knowing that political parties have used corruption, religion and caste in their strategies to gain political power. This has bred violence, and communalism that has led to over 3000 communal riots since 1947. We then have to set up expensive and elaborate committees to solve the problem !

Is this the price we have to pay for democracy ? Frankly, people are fed up also with the daily accounts of misdeeds, beastliness and corruption because it removes every vestige of national pride we might once have had. In a country with such fervent worship of the gods, our human idols are now being presented only with feet of clay with nothing above the ankle. How can a country respond to this image of leadership? Democracy needs leadership the people respect, not this sordid commerce in short and ego-centric political gains.

India is undoubtedly a phenomenon. It throws up fictional character and fictional scenarios of bewildering entertainment and diversity, yet as subtle as a third nerve, a pragmatic nationalism asserts itself in times of crisis. This is happening now." (Tara Ali Baig in the article "Values Old and New—"*Hindustan Times* 16.9.1987)

2. "How is contempt for law engendered ? The process is a continuing one, the effect permanently damaging. It begins by local politicians and officials manipulating the posting of favoured officers in key posts, especially at the level of the police station. Naturally the officer posted as an act of favour has to make payment, both in cash and by way of overlooking the criminal activities of his sponsors. At the cutting edge level of the police station the criminal soon acquires a special status, at the cost of law-abiding citizens. Gambling, prostitution, the protection racket all flourish, to the enrichment of criminals, politicians and officials. These very criminals are often the source of communal trouble and the police and magistracy, which are in their pay, are naturally unable to act against them.

The second link in the chain is the defiance of law by criminals, in the knowledge that if they are caught, they will either be able to bribe their way out of trouble or their politician friends will ensure that the cases are withdrawn. Gradually only those persons are handled before the courts as accused who either have no god-father or whose offences are petty ones. With the fear of the police gone because the local station officer is in the pocket of a criminal, the fear of the courts also goes because cases are not pursued vigorously.

Another major link in the chain is the weakness of Government in prosecuting cases where a community or a group has held another community or group to ransom and terror. When a riot occurs and property and lives are endangered, there is no justification for withdrawal of cases against the rioters. The fact, however, is that there is almost no follow-up of such cases and very often the rioters are released from jail and paraded around like heroes. How can there be respect for law and the rights of others if rioting is permitted with impunity ?

The most vital link in this chain of disrespect for law is forged when some law makers become law breakers. Here are three examples. The former chairman of a public sector corporation in Madhya Pradesh is alleged to have retained for personal use a vehicle of the corporation after he ceased to be Chairman. The corporation, which has filed a suit for recovery of the vehicle and damages, has been told at the highest level in the State to withdraw the suit. In another case, the supporters of a certain politician objected to the lawful allotment of a house to an officer, subjected him to personal humiliation and only dispersed when the staff union of the organisation headed by the officer forcefully intervened. No action has been taken against those who harassed the lawful occupant of the house. In yet another case, Government has ordered the withdrawal of a prosecution of a person against whom a prima-facie case of attempted murder was made out and the matter placed before a competent court. The unfortunate thing is that all three persons concerned are legislators, either in a State or at the Centre." (M.N. Buch, 'A Lawless 21st Century' *Times of India* (30-9-1987).

3. "It is intensely disconcerting that a community of teachers should indulge in such an attack and humiliate their fellow-teachers in such an intolerable situation. Those who are supposed to have been entrusted with educating our youth and uplifting their character to become worthy citizens of this great country, were indulging in violence against their own colleagues. Isn't this a case of total abdication of moral responsibility ?

Let us look at this shocking experience from another angle. Take the Federation President who was beaten up by his colleagues. He is known to be a distinguished teacher. How will he be able to exhort his pupils to practise discipline and preserve integrity ? And the teachers who have participated in such goondaism, how can they go back and claim the respect and attention of their pupils ?

It is this exhibition of moral degeneration of a section of the teachers who are supposed to be custodians of our civilisational heritage that has become a matter of grave concern for all right thinking citizens of this country. It provides the measure of our abdication of cherished values. It is time eminent academics instead of withdrawing into their shells come forward to enforce civilized norms of conduct on the part of their colleagues." (Nikhil Chakraverty 'Where have all the values gone ?' *Times of India* as reproduced in the *University News* 21-9-1987).

Where have all our values gone ? Surely, our values are cherished as our great heritage enshrined in our sacred texts and safely treasured in our bookshelves and libraries, only to be referred to on occasions when we need them in support of our ego-centric demands. We praise non-violence and practise violence, we preach socialism, but perpetuate inequalities, we abhor corruption but we indulge in all sorts of corrupt practices, we preach morality but do not hesitate to commit immoral and unethical acts, we pretend spirituality, but practise materialism, we advocate equality and social justice, but practise exploitation, we teach values but act without them. In short, we have become a nation of hypocrites. It is in this context that there is an urgent need to inculcate values at all levels of our society, without which we will not be in a position to arrest our accelerating social degradation. Therefore, education in human values becomes of paramount importance in the Indian context.

III

VALUE EDUCATION AND PERSONALITY DEVELOPMENT

The type of society we have is a reflection of the type of relationships which the individuals develop. The interrelationship and interactions of the individuals depend upon the personalities of the individuals, that is their values, beliefs and attitudes. The individual, right from the time of its birth internalizes the values, beliefs and attitudes of others by a process, the sociologists call socialization. Socialization is a process by which the individual adjusts itself to the group by internalization of the norms of the group. Internalization of the culture of the society or what we call socialization of the child takes place in the family, school and peer group situations. Socialization does not stop with the children; it is a continuous process. Adult socialization takes place through the multiplicity of interactions in which the adult is engaged. Though socialization is used in relation to children it is a general and continuing process; an adult can at any age acquire new values by interacting with new groups.

During the last few decades, and particularly since Independence (1947), the traditional society of India has been undergoing enormous changes. The Indian social system with its agro-handicrafts economy, feudal-dynastic polity, religio-philosophical foundation and a structure based on joint family, caste and village community has been shaken to its foundations. Multi-directional forces of urbanization, industrialization and socio-educational advancement have affected most aspects of traditional Indian society. These various processes have diluted a number of traditional patterns. The cumulative effect manifests itself in the individualisation of attitudes and values and concomitant changes in the same direction in the social institutions. Accepted ideals and values are changing considetably with the result that the accepted world-view and verbalised idea system are in a state of flux. However, these recent techno-economic changes have not swamped the traditional structure absolutely. There is a zone of indifference. In this realm tradition survives. There, as it were, traditional and modern values coexist. Western ideals, values and attitudes have permeated the traditional system and neither the traditional nor the modern remains the same. This had also developed a state of ambivalence.

At this time when Indian Society is at cross roads, when there is a conflict of values, and consequent ambivalence all-round, which values, what kind of value education can be of help ? Broadly speaking, values are what one considers desirable. But whatever one considers desirable need not be shared by the group of which the individual is a member. Further, what the individual considers desirable may be rooted in egocentrism and may go against the society. Therefore, values, to which we refer, are those desirable ideals which are intrinsic in themselves and are worthy of being pursued both from the individual and societal points of view. Such values serve as normative guides to individual behaviour and help in social integration and social solidarity. It is these values which we would like to impart through our education system.

The world of values is rich and variegated. There are certain basic universal perennial human values applicable to mankind anywhere in the world. And there are value systems specific to different socio-cultural entities at different periods of time. A list of values will include : truthfulness, sincerity, integrity, honesty, goodness, beauty, love, non-violence, conscientiousness, compassion, endurance, perseverance, self restraint, independence of thought, righteousness, courage, friendlines, generosity, selflessness, equanimity in thought, feeling and action; concern for other living beings, empathy, excellence, grace, decency, concern for the natural environment, tolerance, confidence, self esteem, honour, simplicity, being responsible, innovative, being adventurous, democratic way of living and acting, secularism, socialism, equality, cooperation, national integration, international brotherhood, removal of poverty, caste, illiteracy, ill health and backwardness; upliftment of the weaker sections, pride in heritage and culture, peace, incorruptibility, law abiding, community orientation, and public duty, concern for public property, civil sense and responsibility, stability, self-reliance, scientific temper, social justice, etc. These values can be categorised as spiritual, religious, moral, ethical, social, humanistic, personal, political economic, aesthetic, altruistic, etc. They can be classified as universal and particularistic, basic or core and peripheral, etc. But the classification that suits value education most is a classification of values into three categories (1) self oriented, (2) society oriented, and (3) altruistic. The self oriented values are those values the inculcation of which is essential for improvement of one's character like truthfulness, ahimsa or non-hurting, punctuality, dignity of labour, cleanliness, patience, self-reliance and equanimity. Society oriented values are those values which contribute to better social relationships as for example courtesy, gratitude, duty towards others, tolerance, magnanimity, cooperation, understanding, compromise, compassion, kindness and non-violence. Altruistic values if internalised should help the individual to transcend his personal interest in favour of the good of others. The examples of altruistic values are fraternity, sacrifice, forgiveness, concern for others, empathy, service, sharing, sympathy, hospitality, justice and love.

Shri Sathya Sai Education in Human Values Trust emphasizes five basic human values in their value education programme—righteous conduct, truth, peace, love and non-violence. A Gandhian programme of value education will add to it, the values of dignity of labour and self-reliance.

Some of these values go contrary to the values inernalised by children from the cultural settings of the groups they belong to. If children grow up in a traditional socio-cultural milieu, they will imbibe values of non-egalitarianism, sectarianism, ego-centrism and ethnocentrism which are opposed to values of equality, fraternity, cosmopolitanism and altruism. Therefore, the task of educational institutions assumes great significance. Opportunities have to be provided to unlearn the wrong values imbibed and simultaneously to learn positive human values which are conducive to social development. The child and the adult alike who internalise narrow cultural norms will have to be desocialised and resocialised by internalisation of basic human values. Socialization is essentially a learning process aided by primary and secondary groups and associations. Education is also learning process; the difference being only in its elements of voluntariness and directionality. The individual is helpless if he/she assimilates the wrong values on account of the membership of sectarian or closed social groups and the subsequent natural process of socialization that takes place involuntarily through the social contact and interactions with the rest of the members of the group. Therefore, through new educational strategies the individual has to be motivated and provided opportunities to imbibe positive human values which will be helpful to him and to the society in general. With, by and large, a tradition oriented society with all kinds of dogmatic, bigotic, narrow-minded and parochial norms and values constituting the core of the culture which is being internalised by the majority of the illiterate population of India that is expected to rise to 500 million by the year 2000 A.D. with the present 36% literacy rate, both our formal and non-formal education programmes should aim at a simultaneous de-education — de-socialization and re-education — re-socialization process, in terms of positive social values. Only when the individual improves her/his character, only when the individual develops an altruistically oriented personality can we hope to stop the degradation of Indian social system. Altruistic personalities will develop only if we are capable of providing the individuals opportunities to imbibe positive human values. With the progress in value education it would be possible for us to resolve value conflicts and remove value ambivalence and save our society from the present situation of impasse and help developing human personalities whose attitudes and actions will contribute to the building of a qualitatively better Indian society.

IV

VALUE PRIORITIES : VALUES OF NON-VIOLENCE

Values of non-violence should be accorded priority in any value education programme in India today. Values of righteous conduct, truth, peace, love and non-violence, dignity of labour and self-reliance should from the core of our value system. As indicated above, the contemporary Indian social scene is really pathetic. Human society in India is compartmentalized consisting of innumerable vertical and horizontal divisions as a result of hierarchies and differentiations of all kinds that exist on the basis of caste, religion, region, language and other narrow considerations. The rich and the poor, the haves and have-nots, the elites and the masses and the many categories of social groups that exist, serve more as causes for discriminations, tensions and conflicts than for harmonious social relations. Different sects of the same religion are fighting to destroy each other. Terrorism is sending shock waves throughout the country. Violence has become a social phenomenon that threatens the very fabric of our social order. The authority of the family which is the fundamental social institution that determines the nature of any society, stands eroded and the positive familial values seem to have ceased to exercise any normative control. The new values that replace traditional values have still to establish their credentials and the capacity to usher in social progress. In this context it is imperative for us to adopt new educational strategies to promote egalitarian values that help us to eliminate social inequalities and injustice and to establish a qualitatively better social order. This indeed is no easy task, but if efforts are made, it is not unattainable. The first step to take in this direction is to undertake the reform of the individual. As Prof. Bart Landheer ('Pause for Transition'. The Hague, 1957) has mentioned, "Ultimately, it is the individual with all its attributes that is the only reality which is before us, but it is a reality that should not be isolated, even in theory, from the setting in which the life-drama unfolds itself and from the general natural laws which seem to govern and control the actions of the player, who appears in the most startling variety of roles."

The individual is the only real entity in society which is tangible and which can be perceived by others, but the individual is not an isolated phenomenon. The individual and society are invariably interrelated. The individual is dependent upon the society in which he is born and grows up, for his values, ideas and beliefs and the individual in turn is responsible for society's continuance and transmission of its culture. The individual is influenced by several groups, namely, kinship, professional, economic, regional, national or civilizational groups, of which he is a member. For example, in the beginning of his life, the individual is influenced mainly by the family, and the kinship group, peer groups and eventually mainly by the different secondary groups of which he is a member. Thus, the relationship between the society and individual is obvious : one does not and cannot exist without the other. Individual is not a mere biological organism; it is the impact of society that makes the individual a person i.e. an individual who can contribute to the continuity of society. Similarly, the society, i.e. the sum total of social relationship, maintains its continuity through individuals, through a process of socialization which moulds the biological organism into a social being, an individual person.

It is in this context that the Gandhian concept of individual transformation and character development assumes significance. The Gandhian system of basic education is essentially directed to achieve precisely this goal. 'While the present education system is engaged in promoting accumulation of information and acquiring a spirit of competition that develops egotism and alienation. Gandhian basic education develops three aspects of the individual (1) the mind, (2) the heart, and (3) the spirit; the child knows with his mind, loves with his heart and creates with his hands and thus become a fully developed integrated personality.' (Guy de Mallac, Seven steps to Global Change. 1987). "Children in Gandhian Schools don't accumulate learning as many people accumulate assets or riches—they don't learn for the purpose of being first or winning a competition, at the expense of others. Rather than being acquisitive/competitive, Gandhian education is cooperative. It prepares the individual to fit into a nonexploitative social structure. While it endorses the development of intellectual abilities, Gandhian education agrees with Albert Schweitzer that love is the supreme knowledge, and views as the highest value the creation of a non-exploitive and loving framework of relationships with others. "Gandhian Basic Education" (or "New Education"—Nai Talim) fosters self-sufficiency. With that aim in mind, students do their own laundry, work in the kitchen, sweep and scrub, practice gardening, weaving, pottery, carpentry—as well as learn the three R's and acquire knowledge of essential academic subjects. In summation, "Basic Education" is : (1) Child centred or learners-centred; (2) dynamic; (3) cooperative; (4) non-violent; (5) geared towards the acquisition of self-sufficiency." (Guy de Mallac, 1987).

The values of non-violence imparted through basic education, may develop altruism and altruistic personalities which would help in the creation of greater social harmony. With substantial increase in love, sympathy and cooperation in interrelationships of individuals there will surely be a qualitative improvement in social conditions. A truly non-violent person radiates peace, compassion and kindness to other human beings. His very existence in a social group will be a source of inspiration for positive social action. Therefore, the values of non-violence should have a prime place in any programme of value education.

V

THE METHODOLOGY OF VALUE EDUCATION

Enough has been said about the value of value education. No further clearance is needed than the sanction of the new education policy to make our educational system value oriented. But how to do it? Very little is available by way of a guide to go about promotion of value education and much less to assess and understand the impact of even marginal programmes like moral education programme imparted in schools, in terms of actual assimilation of values in one's personality system and improvement of character and behaviour. Therefore, it is imperative to develop a sound methodology for impartation and evaluation of value education. Such a methodology should be dynamic and should consist of specific techniques and methods to impart values to individuals of different age groups and a system of evaluation of the effectiveness and impact of value education programmes, the results of which could be utilised to reorient the methodological strategies. As the Ministry of Education's Working Group which reviewed the Teachers Training Programme in the light of value orientation has rightly put it (Govt. of India—1983):

"It is, however, sometimes argued that there is a valid distinction between knowledge and values and that while knowledge can be taught, values cannot be taught. But when we examine this view more closely we find that what is meant is that the methods which are valid and appropriate in the field of learning in regard to knowledge are not applicable to the field of learning in regard to values. We may readily accept this contention, and we may insist on the necessity of recognising the fact corresponding to each domain of learning there are valid and appropriate methods and that the effectivity of learning will depend upon an ever-vigilant discovery of more and more appropriate methods in each domain of learning. It is clear, for example, that while philosophy can be learnt by a process of discussion, swimming cannot be learnt by discussion. In order to learn to swim one has to plunge into water and swim. Similarly, the methods of learning music or painting have to be quite different from those by which we learn mathematics or physics. And indeed, when we come to the realm of values, we must recognise the necessity of a greater scruple in prescribing the methods which can be considered to be distinctively appropriate to this field.

One speciality of the domain of values is that it is more centrally related to volition and affection, rather than to assume that value oriented education should be exclusively or training of volition and affection. This point needs to be underlined because of two reasons. Firstly, it is sometimes assumed that value oriented education should be exclusively or more or less exclusively limited to certain prescribed acts of volition and that the value oriented learning should be judged by what a learned, 'does' rather than what he knows. In our view, this is too simplistic and exclusive, and we should avoid the rigidity that flows from this kind of gross exclusivism. Secondly, and this is an opposite view—it is sometimes argued that learning is primarily a cognitive process and, therefore, value orientation learning should largely or preponderantly be limited to those methods which are appropriate to cognition. In our view this, too, is a gross exclusivism which should be avoided. We recommend, therefore, that while methods appropriate to volition and affection should be more preponderant, methods appropriate to cognition also should have a legitimate and even an indispensable place. This is reinforced by the fact that the striving towards values stirs up the totality of the being and cognition no less than volition and affection is or can be stimulated to its highest maximum degree, provided that the value oriented learning is allowed its natural fullness."

There are three entities involved in any value education programme. (1) The teacher, (2) student and (3) the society. The contents of teaching, the example the teacher is able to provide and the way the instruction is carried out are important aspects of good teaching. Equally important are the qualities of, receptivity, motivation and the capacity to comprehend on the part of the student. The efficient performance of the roles of the teacher and student depend on the family and the overall social situation in which the teacher, student, and the teaching-learning situation takes place. Thus the essential prerequisites of value education are exemplary teachers, motivated students and a favourable socio-cultural milieu. The quality of the teacher and the standards of our teaching are indeed at a very low ebb at present. Therefore, in the various teacher training programmes special emphasis has to be given to equip the teachers with necessary qualities and a motivation for value education.

Apart from the meagre moral education that is being imparted in the schools, as the Working Group to review Teachers Training Programme rightly recommends : "a well conceived programme of studies of various subjects should naturally be provided both in their contents and thrust the requisite materials for value education" and "radical measures should be adopted to change the present degree-based 'anti-value oriented examination system' with a view to unilaterally fix the educational process on the right aims of education." This calls for a complete overhauling of our syllabi at all levels. A content analysis of school and university curricula would reveal that the courses are hardly intended to improve the quality of the individual; they are primarily for acquisition of information. Therefore, the recommendations of the Working Group : (1) that the programme of studies should be so carefully devised as to emphasize those aspects which can readily provide to teachers and students the required opportunities, conditions and materials for value education, (2) that specific areas of value orientation should be given special attention, (3) and that in the totality of educational programmes, the core programme should be of value education.

The way in which the teacher communicates ideas is also significant. An idea supported by stories and facts and presented through audio visual aids might make a greater impact than merely communicating it in a rough and prosaic manner.

Much more important than the curriculum or a particular way of instruction is the exemplary behaviour of the teacher. Even if a teacher is able to impart the highest values in the most efficient manner, if in actual life he is guilty of misconduct, all his preachings will result in nothing. On the contrary, the noble character and the exemplary behaviour of a teacher will provide enough incentive to students to develop positive values of life even if such a teacher does not offer any formal instruction in value education.

Similarly the family, the peer group, the community and the wider society play a vital role in motivating and influencing both the teacher and the student alike to assimilate values and to resort to value oriented behaviour. This is perhaps best explained by the concept of 'sat sanghs' the social occasions organised to meet good people.

Both formal and non-formal education should have value contents. As a matter of fact whatever be the historical reasons, the formal and non-formal educational processes in India run parallel to each other without much convergence, whereas they should work in a coordinated manner to make effective our overall educational efforts. Radio, television, newspapers, magazines and the various audio visual aids should be utilized for value education and character building through formal and non-formal institutions. Separate programmes have to be envisaged for teachers,students and members of the community.

The Sathya Sai Education in Human Values Trust has 'worked out a methodology for their value orientation programme. (Our Role and Human Excellence, Sathya Sai Foundation, 1987). So also the All India Association of Catholic Schools has been organising programmes of value education (How to live with values, M. Pia Nazareth and Maria E. Waples, 1980). The Gandhian basic education scheme has its own methodology.

However, a full-fledged methodology of value education is still to emerge. Introduction of value education programme in our education system has only just begun. The experience that we will gain over the years will indeed help us to evolve a sound methodology for value education in India. But to achieve positive results, we must have efficient methods and techniques even to begin with. Let us hope that the beginning that we have already made in value education will yield rich dividends in terms of both methodological insights and positive impact.

VI

VALUE EDUCATION AND UNIVERSITIES

Universities indeed play a significant role in providing educational leadership. When students join the University they may already have acquired certain positive and negative values, a properly oriented value education in the university system will indeed be helpful, especially when the students have already been exposed to value education programmes at lower levels. The university can perform a reinforcing role, thereby establishing continuity. In case of those who have not been exposed to value education at all, surely the University can provide opportunities to assimilate positive values. Further through their formal and non-formal channels, universities alone can offer up-to-date teacher training and education programmes which will have substantial value education contents. Therefore, it would be wrong to suggest that universities have a lesser role to perform in the context of value education.

The following programmes suggested for universities to undertake should give an idea of what universities can do to promote value education :

(1) Universities should develop source materials for value orientation in education in the form of written lectures and audio visual aids and introduce value oriented education schemes.

(2) Emerging out of man's complex relationship with fellow human beings and with nature in a broad sense, a deep sense of love and concern for the animate and inanimate world around him is an essential part of man's awareness of the need for conservation of resources, renewable as well as non-renewable. The sublime values of oneness with nature in beauty, conservation and preservation need to be nurtured and protected and promoted. For this purpose, universities should establish interdisciplinary Centres of Ecology, Environmental and Conservation studies.

(3) The pivot of a programme of value education will be the teacher. His role is crucial. Universities should conduct :

(a) National tests for appointment of teachers.

(b) The probation period for newly recruited faculty members in universities and colleges should be uniformly made as two years, during which they should be required to successfully undergo a training and orientation programme. While part of the training and orientation should be exclusively for deepening knowledge in the discipline, including acquaintance with recent and important developments in the subject of specialisation, the other part should be for the development of qualities, capacities and skills with special thrust on theories of learning, psychology of youth, communication skills and value education. At the end of the course, a dissertation should be obligatory.

(c) Under the Faculty Improvement Programme of the UGC, value orientation should be made an essential ingredient of the training.

(d) Special fellowships of 15 months' duration should be instituted. These fellowships should be awarded to two teachers of 10% of selected affiliated colleges. Out of these 15 months, 3 months should be devoted by the teacher to undergo training in value orientation at specially selected centres of higher education/colleges where such programmes are already under implementation. The trainees should be provided the facility of free board and lodging and an outstation allowance of Rs. 1000/- per month.

Such specially trained teachers should then have the responsibility of developing a group of at least 4 teachers in their colleges. When a viable group has thus been formed, regular classes in value orientation with selected reading materials should be started and the students attending such classes should be given due academic credit as is given in other regular subjects.

(e) All teachers must be involved in programmes on youth welfare and extension programmes suitably synthesized into a plan of action, oriented towards the local and regional needs. A well planned pre-service and in-service training-cum-orientation programme should be arranged for these teachers pertaining to the various roles in the above mentioned areas. Improved and extended facilities of sports, games, gymnasium, etc., should be made available in universities and colleges for inculcating in teachers and students qualities like team spirit and cooperation. Due academic recognition should be given to the work put in by them in these areas as well as in extension services rendered to the society by the institution. The activities under NSS, NCC, Scouts and Guides, Art and Culture and other subject associations should be promoted by providing incentives in terms of academic recognition. As a part of curriculum, educational tours to the different parts of the country, important exhibitions and fairs be organized. These tours should be supervised by senior faculty members along with planned and action oriented activities. At the end of the tours, the students must be required to submit reports identifying the significance of various values recognised and learned by them and due academic credit be mentioned in their degrees/diplomas awarded in their basic disciplines.

(4) National Service through participation in approved social work and national reconstruction activities should be compulsory for all students. A nine months' national service and three months' work experience should be made compulsory before the first degree is awarded.

(5) Working and learning should be the objective of education at university level. A 'work ethos' should be created. All teachers must stay in college/departments for 6 hours a day.

(6) The extension role of the universities should be enlarged by a greater involvement of the university community in the programmes of Adult Education, Continuing Education, Population Education, Conservation of Energy. Environment as well as Research and Development in the solution of the problems of the community around it. The summer breaks and the winter breaks should be effectively utilised for reorienting the participation of the students and teachers in camps and workshops, etc., organised for this purpose. A block or a village be adopted by each University Teaching Department of the College for bringing about its transformation and development by scientific methods. Appropriate institutional arrangements be made by the universities and colleges for planning and continuing exploration of various activities in these fields.

(7) All resolutions and suggestions made in connection with National Integration by various bodies such as exchange of teachers, admission of 20% students of other regions, teaching of one Indian language other than the regional language, selection of teachers on All India basis, studies of all religions with equal emphasis and observance of national days and festivals of various communities, educational tours, community singing be implemented in actual practice. The textual materials in various subjects must emphasize National Integration. An annual report pertaining to these activities be obtained from every institution and monitored by the cells created at Universities, State Departments of Education, UGC and the Central Ministry of Education for National Integration.

(8) Associations of Teachers, Students' Union, Unions of Non-teaching Staff should evolve codes of conduct.

(9) A Tribunal for each university with a common chairman for a cluster of Universities be instituted to look into the grievances of employees.

(10) Degrees should be delinked from jobs so that examination does not remain the main focus of attention for students as well as teachers. Sufficient degree of freedom be allowed to the students to change their stream of studies at all levels on the basis of National and State level tests conducted from time to time.

(11) All universities and colleges and the faculty should show a commitment towards Gandhian, cultural, secular, national and scientific values. A constant endeavour must be made by them to identify new areas of activities for the promotion of these values. The UGC must foster Research Fellowships and National Associateships in studies pertaining to these values.

(12) Foundation courses on cultural heritage, linguistic aspect of education and values, population education, freedom movement and current history of development of India, scientific progress achieved, methods and discoveries, resource management and human development, international cooperation and world peace and elements of agricultural and industrial development be introduced in all universities and colleges for a continuous nurturing of values necessary for promoting the unity of India and progressive nationalism.

(13) Formation of social service leagues should be encouraged; social work should be given academic credit.

(14) All educational institutions should provide adequate opportunities to informally inculcate positive values in our youth by providing facilities for sports, games, debates, get-togethers and other extracurricular activities. Participation in such activities should be given academic credit.

(15) All universities should be encouraged to establish University Community and Citizens Associations. The parents, teachers, karamcharis and alumni and other citizens of the city interested in promotion of values should be the members of the Association. The Association should meet atleast twice a year and organize such activities as are conducive to the attainment of the objectives of Value Orientation in Higher Education. Formation of separate Alumni-Almamater Associations and Teacher-Parent Associa-

tions should also be encouraged and they should be adequately represented in the Association.

(16) A Centre for indepth study, research and undertaking action-oriented programmes should be set up at each university for promotion of value oriented education.

A good deal of success in restructuring our university education in terms of value education depends on the efficiency of the management of the university. A Vice-Chancellor has a great responsibility in guiding the destiny of the university. If the Vice-Chancellor is incapable of functioning independently, honestly and conscientiously he is doomed to destroy the university system. Most regrettably many Vice-Chancellors have not been able to discharge their responsibilities, with a firm commitment to certain fundamental values which we want our students to imbibe. If a Vice-Chancellor feels obliged to a politician or a group of teacher politicians for the position he holds and acts in accordance with their demands and pressures abandoning all basic values, how can one expect that teachers and students of the university he presides over would develop exemplary character ? If contractors and politicians use their money power and political power to pressurise a Vice-Chancellor to do things which are unethical, the blame is not only on the Vice-Chancellor but indeed it stands shared. The presents system of giving university construction contracts to money hungry private contractors, as has been indicated by a number of reports including those on Central Universities, is responsible for many corrupt practices in the university system. The contractor with his money power not only indulges in corrupt practices to increase his margin of profit but also often manipulates appointments, examination results and so on. The politician by getting appointed one of 'his men' as a Vice-Chancellor gets all favours executed through him which gives him perpetual political advantages. If universities have to be saved from this extraordinarily deplorable condition and make them repositories of virtues and values, real abodes of the great goddess Saraswathi, the present method of appointment of a Vice-Chancellor has to be immediately dispensed with. Persons of character, of indomitable will to execute fair decisions without fear or favour, in the interests of the university community and the wider society, should be charged with the responsibility of managing universities. They should be selected through reputation techniques rather than through the farcial committees as is done at present. The Vice-Chancellors so appointed would not cling on to their positions, sacrificing all self respect and human dignity in a servile manner for the sake of keeping the chairs when they are faced with insurmountable opposition from anti-social forces to the positive and innovative educational schemes and measures which they want to execute. Similar is the case of other managers of the university system. Whether it is the Registrar, Controller of Examinations, the heads of various units and departments or professors or other teachers and employees, they should all be of exemplary character. No individual with a record of misconduct has any place in a university system; such individuals should be sent out of the university irrespective of all pressures and opposition. There should be periodic assessment of the conduct and behaviour of all university employees so that academic leadership is ensured in the hands of persons who can give a proper and enlightened direction to the education system. What we said about the university system applies equally to the schools and colleges, headmasters and their teachers and employees. We have to particularly keep this in mind when we are establishing large number of autonomous colleges. At all levels it is imperative that immediate measures are taken to regulate the management of educational institutions. Unfortunately educational management has not received adequate attention in the new policy statement. But if we have to implement the New Education Policy in full measure, then there is no way but to ensure a proper managerial system for our educational activities.

But it appears the very implementation of the New Education Policy is in peril. It is almost two years ago, we announced after the approval of our Parliament, our New Education Policy and declared: (1) that higher education is a crucial factor for national development and survival and hence has to play a key role in producing teachers for the educational system (Part V, para 5-24), (2) that State level planning and coordination of higher education will be done through Councils of Higher Education, the UGC and the Councils will develop coordination methods to keep a watch on standards (Part V, para 5-30), and (3) that in the interest of greater coordination, a National Body covering all aspects of higher education will be set up. No Educational Pandit seems to have any idea as to when these Councils and apex body, the very agencies through which we hope to get our new education policy effectively implemented would be set up.

Perhaps the University Grants Commission is overburdened by fund allocation and thus unable to devote adequate attention to the control of educational standards and perhaps no time at all for undertaking innovative schemes for promoting value orientation in education as is evident from the neglect that the so-called University Grants Commission Committees on Gandhian Studies, National integration and Value Orientation in education suffer. Is the Association of Indian Universities in a position to perform the role of a catalyst and make the University Grants Commission and our Universities function more effectively to make our education value oriented which will be a fitting contribution to the implementation of our New Education Policy and to our efforts for national reconstruction ? □

AIDS FOR EDUCATIONAL COUNSELLING

Highly Useful Publications particularly for Embassies, Employment Information and Guidance Bureaus, Guidance Counsellors, etc., etc.

UNIVERSITIES HANDBOOK—1985-86

pp. 1170 Size 8½" × 11" **Hardbound**

Comprehensive and latest information covering all the **155** Indian Universities including 22 Agricultural Universities, 10 Institutes of National Importance (including 5 IITs) and 11 Deemed to be Universities. Some of the heads of information are : introduction to the university courses of studies—university-wise and discipline-wise, session dates, scholarships and fellowships, library and research facilities, constituent/affiliated colleges, university-wise, deans of faculties, names of teachers, etc. **Rs. 450.00**

HANDBOOK OF DISTANCE EDUCATION—1986

pp. 98 Size 6½" × 9½" **Paperback**

The Handbook covers Universities offering courses through Correspondence at Certificate, Diploma, Degree and Postgraduate levels. The heads of information are: admission requirements, eligibility, medium of instructions, examination centres, and other details. **Rs. 35.00**

HANDBOOK OF MANAGEMENT EDUCATION—1989

pp. 134 Size 6½" × 9½" **Paperback**

A compendium of information for those seeking admission to MBA or allied courses in Management in India. Includes procedure for admission, eligibility requirements, scholarships, fellowships, freeships and stipends, tuition and other details. **In Press**

HANDBOOK OF MEDICAL EDUCATION—1987

pp. 340 Size 6½" × 9½" **Paperback**

A complete and reliable guide for admission to MBBS, BDS, BPharm., BSc (Nursing), BMS (Homoeo), BAMS, BUMS courses, etc. Includes admission procedure, eligibility requirements, time for applying, scholarships, fellowships, freeships, stipends, tuition and other details. **Rs. 45.00**

HANDBOOK OF ENGINEERING EDUCATION—1988

pp. 332 Size 6½" × 9½" **Paperback**

A complete and reliable guide for admission to BE, BTech., BSc (Engg) courses, etc. in India. Includes admission procedure, scholarships, fellowships, freeships, stipends, eligibility requirements, tuition & other fees and other details. **Rs. 50.00**

HANDBOOK OF AGRICULTURAL EDUCATION—1986

pp. 250 Size 6½" × 9½" **Paperback**

A compendium of information for those seeking admission to B.Sc. (Agriculture, Horticulture, Forestry, Fisheries) B.V.Sc., B.V.Sc. & A.H., B.Sc. (Agricultural Engg.) courses, etc. in India makes available at one place every relevant detail including—last dates prescribed for applications, scholarships, freeships, stipends, boarding and lodging facilities; eligibility requirements, procedure for admission; tuition and other fees; reservations, etc. information about 156 Agricultural Colleges in the country.

A complete and reliable guide for admission to Agricultural Courses. **Rs. 40.00**

BOOKS ALSO AVAILABLE WITH LEADING BOOKSELLERS IN THE COUNTRY

Address Enquiries to :

Under Secretary (Publications)
ASSOCIATION OF INDIAN UNIVERSITIES
AIU House, 16 Kotla Marg, New Delhi 110002
Phones : 3310059, 3313390, 3312305, 3312429
Telex : 31-66180 AIU IN **Gram** : ASINDU

NEW EDUCATION POLICY
Making the System Work

G.B.K. Hooja*

The New Approach

Let me point out at the outset that the programme of Action (POA) statement made in this regard is just a rehash of old and archaic platitudes. It just does not click. Referring to the 3 short paragraphs on this subject in the National Policy on Education (NPE) (1986), it endorses the necessity of introducing discipline into the system "here and now, in what exists", of giving a better deal to the teachers to go side by side with a greater sense of accountability, providing improved students' services along side an insistence that their behaviour is in accordance with acceptable norms and affording better facilities to educational institutions to ensure that their performance comes upto national and state-level norms. Appreciating that any insistence on imposition of rigid uniformity or lifeless discipline would not be in consonance with the general tenor of NPE, and the process to be followed in creating the new educational order has to be participatory, co-operative and based on renewed faith in the country's future, it proceeds to develop a "clear" approach to this "crucial" task in the following "essential" aspects :

(a) Certain norms of performance must be laid down for observance by the administration, teachers, students and educational institutions. It should be made clear that these norms are non-negotiable.

(b) Non-observance of these norms should inevitably lead to certain consequences.

(c) Some immediate measures have to be taken to improve the working conditions of teachers and the conditions in which students study and live. Similarly, with regard to the educational institutions.

The POA further goes on to say that the faith manifested by the nation in the teachers and the students, as reflected in NPE, implies that they will be systematically consulted at various stages of planning and implementation of Making the System Work. Indeed much of the responsibility for this will rest on teachers and students.

Any observer of the educational scene over the last 4 decades would find that these issues are hardy annuals which have come up for consideration in academic debates and conferences, committees and commissions, from time to time. Surely and steadily, suitable action has been taken to improve the working conditions of teachers and students in accordance with availability of resources and assessed requirements. There has been constant exhortation to draw up and follow codes of conduct in keeping with the responsibilities and status of the teachers and students. But the problems persist.

Parasitical Culture

The bane of our educational system is that it is elitist and unproductive. On the one hand, it produces highly qualified persons who find local employment avenues too stifling and are, therefore, tempted to go abroad to find scope for their talents. On the other hand, it produces swarms of ill-educated persons who find it difficult to get absorbed into the national economy. This system, divorced as it is from ethical instruction and precept, develops a parasitical culture gapingly distinct from the *vrata pradhana* system of *Gurukula* education obtaining in ancient India. Several eminent educationists have condemned it as anti-education and it shall remain so unless ethical values are inculcated during the formative years and are made part of the curriculum. In a conference of Education Ministers, the then Prime Minister stressed the necessity of including the moral aspect of life within its scope, and deplored the absence of prizes for outstanding virtues like truth, fearlessness and selfless service.

For the last 4 decades, we have been talking parrot-like of vocationalising our system of education. But the situation is little better than it was at the advent of Independence and the future prospects continue to be shrouded in pious articulation. Pathetically, we seem to believe that articulation is accomplishment.

Gandhiji, it may be recalled, laid great emphasis on inculcating the spirit of self-reliance, self-restraint

---

*Former Vice-Chancellor, Gurukula
Kangri Vishwavidyalaya,
A-15 A, Vijay Path, Tilak Nagar, Jaipur-302004.

and bread-labour. This was the basis of his concept of *Nai Talim* but his ideas were interred with his assassination. Now that the Government is inclined to re-examine Gandhian values, it may be worthwhile to recapitulate his concept of education. Briefly, the Gandhian scheme of education was based on the following 4 main postulates:

(1) that elementary education should be made *free, compulsory* and *universal*;

(2) that it should not be perfunctory and cut short at the end of four years;

(3) that it should be given through the mother-tongue; and

(4) that it should be imparted primarily through crafts like weaving and spinning and not through books only so that the children may produce articles that are marketable and these should be sold to make education self-supporting.

But what is the reality on the ground ? Compulsory and universal elementary education is yet far far away on the horizon, notably in the female segment, which constitutes half of the target group. Generally, it is perfunctory for not many schools have the full complement of teachers, particularly so in the villages and teaching aids and other facilities are woefully missing. The drop-out rate is alarming and, in turn, this tends to aggravate the problem of adult illiteracy. The concept of teaching through crafts was still-born.

As for the medium of instruction it continues to be English in our model/public schools. As a result, a sense of inferiority complex is seeded in the young minds, from the very beginning. In view of job opportunities lying open to persons with knowledge of English, parents understandably desire their children to go to English medium schools and, as is common knowledge, "the craze is now spreading to rural areas as well"; and the educational institutions using mother tongues as media are rated second class, meant for "other people's" children.

Stratified as we are by an outdated caste system, wide economic disparities and the legacy of a feudal past, the children belonging to the affluent classes stand poles apart from the mass of under-privileged children. Snobbery and a feeling of *oonch-neech* are the natural products of this social segregation which inevitably leads to alienation between those who shall occupy leadership positions in days to come, and the common folk. In the land of Krishna, the legendary story of Sudama assumes the character of a farce.

Indian educationists are not unaware of this distortion. The University Grants Commission had, in an earlier communication, recommended that half of the seats in affluent public schools should be reserved for poor and talented students. It had suggested that schools run by private institutions and charging high fees should be made more egalitarian.

Similarly, the Kothari Commission had recommended the growth of "neighbourhood" schools. Surely, these were moves in the right direction. But what has been the response ? It is obvious that something more than mere exhortation is needed to make the educational system fulfil its social role in the national striving towards a Democratic society, viz , an egalitarian ethos and a sense of social commitment.

Towards a New Social Order

The concept of education and hence of educational institutions has undergone a sea change in recent years. Education is no more limited to the building up of knowledge and skills of the pupils but also their social ethos and hence educational institutions can no longer continue to exist in cloisters.

As the Gajendragadkar Committee report on Governance of Universities says, University education has a manifold function to discharge. Pursuit of excellence in knowledge and advancement of knowledge have been the main functions of university education so far. This approach, however is no longer adequate in the context of rapid national development and social change. The function of a university today is not only to enable students to attain excellence in knowledge, but also to contribute directly to national development, to furnish intellectual and moral leadership to the community at large. Today when our nation is struggling to march towards the establishment of an egalitarian society, based on political and economic justice and social equality, university education can no longer remain a passive spectator. The task of creating a new social order which has assumed paramount importance today cannot be overlooked by the university community. Thus the goal of university education has a dual character; firstly, the pursuit of knowledge and the attainment of excellence in different disciplines, and secondly, the development of a sense of ethos which makes the university community conscious of its obligations to the community at large of which it is an important segment. Thus, education now has to have social concerns as well—for the employment of the youth, for the value system to be inculcated keeping in view the ideals of secularism, democracy, socialism and national integration as enshrined in our Constitution. Students and institutions are to be involved in study, work and services related to national development—which has come to be called the third dimension of education—extension. Research and creative activities of the students and institutions are also to be channelised for tackling specific problem of regional and national development.

Learning Facilities

As observed in the report of the Committee to enquire into the working of the Central Universities, it is now widely accepted that a university exists primarily for its students and scholars and through them and their work for the society at large It provides them learning opportunities in a variety of ways through teachers in the classrooms, books in the libraries and experimental facilities in the field or in the laboratories; through interaction with other students in seminars, tutorials, group project or in numerous other fora and activities based in hostels, and through clubs and associations. An important source of learning in actual experiencing of social and environmental realities, first hand investigation of phenomena and situations, and actual participation in activities of a creative and developmental nature. The universities should, therefore, have facilities, structures, management and above all, programmes available in sufficient variety so that each student could learn according to his inclination, aptitude and need. It is only thus that the student could get the best out of the university and the nation could get sustenance from its human resource.

Thus what is needed is the availability of a large variety of courses meant to prepare students for numerous technical, scientific, medical, commercial, cultural, sports and other professions. Introduction of community activity with appropriate logistic support and academic credit also calls for immediate attention. Methods to teaching, therefore, have to include those which require active involvement of students in tutorials, seminars, projects, field work and the like, including writing of technical reports or term papers and short dissertations. Evaluation system has also to change correspondingly so as to be based on the assignments and activities carried out by students and the quality of effort made by them. This can be done, obviously, only by teachers taking part in the process, of course, with due checks and safeguards.

Admission

In order that the universities may retain their all-India character, it would be necessary to allot a number of seats in every university to the various State Governments in the country. In an ideal situation not less than 25% seats should be reserved for students from other states. The bigger States may be given larger representation in the undergraduate course than the smaller states. These seats may be filled on the basis of an all-India Merit Examination which may be conducted by the Association of Indian Universities/UGC. Seats may also be reserved for candidates from SC & ST classes, physically handicapped and ex-servicemen, in accordance with the policy of the Government. Similarly, a certain percentage of seats may be reserved for those who have distinguished themselves in sports and cultural activities.

Discipline

For any organisation to run smoothly, observance of discipline is of paramount importance. Of course, the best form of discipline is self-discipline. It stems from the adage *Sanyam hi Jiwan Hai* (verily, self-restraint is life). This is founded in the practice of *Yamas*, *niyamas*, *aasanas* and *praanaayaama*, which are considered to be the first steps to *yoga*. There are 5 *yamas*, which are rules of social conduct; these are : *Satya*, (Truth), *Ahimsa* (non-violence), *Brahamcharya* (Celibacy), *Aparigraha* (Non-possession), and *Asteya* (non-theft). There are 5 *niyamas* which are rules of personal conduct; these are : Shaucha (Cleanliness), *Tapas* (Austerity), *Santosha* (Contentment), *Swadyhyaaya* (Self study), *Ishapranidhaana* (Self surrender). *Aaasanas* are postures, physical exercises. Conducted with *Praanaayaama* (breath control), they do immense good to the psychosomatic system as vouched by practitioners. Practised together with meditation, these have an incalculable educative influence on the person of an individual and lead to the growth of a balanced, well adjusted, vigorous, vital personality. It is desirable that appropriate facilities are made available at university centres for these exercises.

A university community consists of three main components : the teachers, the students and the karmacharis. The primary responsibility for maintenance of discipline devolves on the teachers. It is axiomatic to say that no university can rise above the standard of its teachers. While full freedom of expression and association must be guaranteed for the teachers as for other citizens, steps should be taken to guard against irresponsible behaviour and actions detrimental to the discharge of duties which may be briefly catalogued asunder :

(a) A teacher shall engage classes regularly and punctually and impart lessons so as to maintain and strengthen standards of academic excellence. His academic duties shall include guidance and instruction to students in the form of tutorials/seminars/practicals and assessment/examination/evaluation, and work assigned to him by competent authorities of the institution. He shall not ordinarily remain absent from duty without prior permission or grant of leave. He shall, however, make surrogate arrangements in case he is obliged to be absent from duty for some reason.

(b) A teacher shall help the college/university authorities in enforcing and maintaining discipline among the students.

(c) A teacher shall participate fully and enthusiastically in the corporate life of the institution and shall perform such other co-curricular and extra-curricular duties related to the institution as may be assigned to him from time to time by competent authorities of the college/university.

While it is the duty of the teachers to teach, it is the duty of the students to learn and maintain discipline. If a student is not interested in learning, there should be no compunction in striking his name off the scholars' register for he no longer answers to the designation of a student-scholar.

After all, higher education is a privilege, which should accrue only to those who are committed and are prepared to undergo the required *tapas* and *yoga* for it.

Thus, here are a few activities the perpetration of which would construe indiscipline on the part of a student-scholar (or a karmachari) :

(a) To disrupt teaching, study, research or administrative work, or prevent any member of the university and its staff from carrying on his duty, or do any act reasonably likely to cause such disruption or prevention.

(b) To damage or deface any property of the University or do any act reasonably likely to cause such damage or defacing; and

(c) To engage in any conduct which is, or is reasonably likely to be, detrimental to the University's purposes.

The third group which comprises the university community is the non-teaching staff. They provide the supportive services which go to maintain the university system and may, therefore, be counted amongst essential services; and an equally serious note should be taken of their default. They should also be held liable if they indulge in practices which construe indiscipline on the part of the student-scholars.

However, it may be appreciated that their unresolved grievances generally lead to disturbance on the campus. These usually relate to :

(a) lack of opportunities for promotions;
(b) lack of housing amenities;
(c) lack of medical facilities;
(d) disparities in pay scales.

The university should, therefore, build up a Grievances Removal system to cover all the three segments of the university community, in which peer groups may also be involved so that the grievances of the teachers, students or staff are not allowed to accumulate.

There should be provision for one appeal inherent in the system.

The Pro-Vice-Chancellor should be appointed as the Chief Proctor and the Head of the Removal of Grievances system, with the required number of assistants. He should keep an overall watch on the conduct of the students and the employees both on the campus and off it. It would be desirable to have a uniform which the students may wear (with pride) while going off the campus. They should be given identity cards with their photographs to be carried on their persons while going outside campus. The university may also organise its own watch and ward arrangement in which the students of the NCC should be involved, besides technical personnel to be borrowed from the State Government.

Corporate life in the University

The University being a community of teachers and students, one of its important functions, besides the cultivation of intellect and providing adequate facilities for this purpose, is to promote the all-round development of the students' personality. It is known that an individual's success in life and his contribution to society are not dependent merely on cognitive development but far more on a harmonious combination of the cognitive, the affective, and the development of manual and social skills. Thus the classroom is not the exclusive focus of learning and there is a very important role for corporate life in the universities. Facilities for corporate life, therefore, serve a singular educational purpose and cannot be taken merely as amenities for students. It is essential that initiative in this respect is taken by the university administration, teachers as well as student associations. In a university, teachers are expected to be the natural leaders and guides of the student community. This can be attained through the organisation of games and sports, debates, discussions, symposia, study circles and other social and cultural activities. It would, therefore, be desirable to :

(a) encourage sports and games;
(b) support drama and film-clubs, cultural activities, and hobby centres;
(c) encourage institution of evening diploma courses in different technical, scientific and literary fields so that regular students in the faculties may add to their knowledge and skills;
(d) participation in adult education and other extension activities.

It may be ensured that *all* students participate in one or the other activity. There should be effective participation of students in the organisation of these programmes through appropriate committees. Teachers should not only encourage but guide students in these activities.

Faculty Advisors

When a student enters the portals of a university at the adolescent stage of his life, he is full of the spirit of adventure and entertains great hopes as well as fears. This is the time when he needs guidance from sympathetic teachers. If this is not forth-coming, he leans on other shoulders, scrupulous or not so scrupulous. Thus if he falls in the clutches of unscrupulous persons, this shall act as a detrimental factor in character formation and may well become the source of his undoing. In Sanskrit, a student is called a *chhaatra* as he is supposed to be under the umbrella of the teacher (*guru*). This umbrella has to be provided in full measure by the teachers who are expected to protect the students from all inclemencies of physical or social weather and all juvenile storms. It would, therefore, be advisable to place each student under the care of a Faculty Advisor or a GURU who may act as his local guardian from the very outset. This teacher should be responsible for the guidance of the student under his charge throughout the period the student remains at the university. He should watch the student's growth as a friend and philosopher and try to solve his difficulties—financial, physical, psychological, social, etc. He should also remain in touch with the parents of the student. In the age of computers, it should not be difficult to maintain his track record and plan the course of his growth according to his aptitude.

Under this scheme, it would be desirable to assign a group of 15 to 20 students to each teacher-tutor for occasional meetings, preferably where the teacher resides, and for discussing all kinds of matters under the Sun—academic as well as social, political and personal. This would provide the student with a sense of security and go a long way in developing his personality and attitudes. So that the teachers can fulfil the above obligations, which are, no doubt, considerable, satisfactorily, it will be necessary to run orientation/refresher courses for them covering youth psychology, group management, teaching methods, preparation of teaching materials, evaluation procedure, etc.

The onerous work involved in the seminars, tutorials, workshops and field work would require on the part of teachers greater attention and earnestness than the work involved in mere lecturing as at present. This work should be duly taken into consideration while assessing the performance of the teacher. The concept of teaching merely by lecturing should be replaced by the dictum that teaching is synonymous with learning and, therefore, a lesson not learnt cannot be deemed to have been taught.

Democratic Decentralization

As far the involvement of the people which appropriately is considered to be important for the successful implementation of the programmes like elementary education (including non-formal education), early childhood care and education (ECCE), adult education, education of the disabled, etc, the Programme of Action document proposes to hold consultation with the grassroot level voluntary agencies and social activitist groups to evolve concrete programmes. This proposal appears to me like riding a limping horse.

Under the guidance of the late Dr. J.P. Naik, Citizens for Democracy prepared a policy frame for the development of education (1978-87), and published it under the title 'Education for our People'. It carried a foreward by Lok Nayak Jaya Prakash Narain. Considering the primacy of work at the grassroot level, it laid great emphasis on the creation of "living education cells" in the local communities. It was noted that work at this level, and particularly in rural areas, was extremely important. It was, therefore, recommended that every encouragement should be given to young and dedicated persons who were committed to this programme and proposed to take it up as their life-mission. It was felt that when this work was developed adequately new ideas might be ganerated to give new directions to policy. "Let us not forget that the educational revolution we need cannot begin in Delhi and spread to the villages. The probability that it may begin in villages and ultimately reach Delhi is far greater", said the document in a pious strain.

We are well beyond the end of the 10 years' period for which this "revolutionary" programme was formulated. The authors of this report had felt the need for organising mass movement to bring pressure on the government to play its due role in the education of the people. They had visualized the necessity of a big reform movement to be started, simultaneously within and without the system and well-planned and coordinated programmes to be developed in which workers within the education system as well as social and political workers would effectively participate. "The entire ethos of the system needs to be radically transformed to create a climate of sustained hard work and dedication," they said. Here we are at the end of the stipulated period and find the educational scenario as bleak as ever, with 2/3rd of our population being illiterate and vast segments of the so-called literates cast under the shadow of dogma, superstitions, fundamentalism, communal virus. Women-burning, female infanticide, untouchability, caste wars are the games that we merrily play as we march towards the 21st century, under the facile alibi of non-interference in religious practices by the State.

The recent tragic incident of Sati at Deorala and the storm created by the entry of a *Harijan* at the Nathdwara temple in Rajasthan is a measure of the magnitude of the work that remains to be done for building up a progressive society and a strong state capable of curbing the deeply entrenched forces of degradation operating against the vulnerable sections of society.

These are not merely administrative problems. These are basically educational problems which have to be tackled at the school/community level. Thus the education system, whether formal or non-formal, has to be given all the support institutionally, financially and socially, to meet this challenge so that it may deliver the goods.

The root cause of this continuing weakness is that we have not given due importance to the growth of village level government. Mahatma Gandhi had envisioned a system of *Gram Swaraj* (Village Self-Government) under which each village was to be a self-governing republic. "In this structure composed of innumerable villages, there will be ever-widening, never-ascending circles. Life will not be a pyramid, with the apex sustained by the bottom. But it will be an oceanic circle", as he graphically put it. As a gesture of respect to Gandhiji the framers of the Constitution agreed to add Article 40 in the Directive Principles of the State Policy, stating that the State shall take steps to organise village Panchayats and endow them with such powers and authority as may be necessary to enable them to function as units of self-government.

In pursuance of this, Jawaharlal Nehru, a thorough-bred democrat by persuasion and conviction, as he was, sought to introduce Panchayati Raj at the historic convention held at Nagaur (Rajasthan) in 1959, but he did not live long enough to give it the necessary sustenance, with the result that the lamp of Panchayati Raj burnt dim and barely survived his death. It suffered from two serious lacks. First, elections were not held regularly which prevented the growth of accountability and induction of fresh blood; second, adequate financial resources were not made available to Panchayati Raj Institutions. So they became anaemic. In course of time, Ashoka Mehta Committee was appointed to suggest ways and means for resuscitation of the process of democratic decentralisation; and it did come forth with a model bill, but the Government of the day developed cold feet, and the report was consigned to the limbo of oblivion.

The Prime Minister has now asked the states to hold elections to Panchayati Raj Institutions as soon as possible. What one fails to understand is why no steps are being taken to suitably amend the Constitution so as to introduce Panchayati Raj as the third tier of Government at the grassroot level in pursuit of Article 40 of the Constitution and thus to redeem the pledge of Gandhiji and Nehru. At one stroke, this should generate a mass movement for the resurgence of village loyalty and eradication of illiteracy and poverty and may hopefully culminate into a surge for social awareness and national integration. In fact, this action is urgently called for creating a new social order based on participatory, co-operative, egalitarian democracy.

Continuing Education

Any finally it may be remembered that education is a continuing process as Will Durant expressed so beautifully when he said : "In my youth, I stressed freedom, and in my old age (79 years), I stress order. I have made the great discovery that freedom and liberty is a product of order. When I was 19, I knew everything and my father knew nothing. When I was 29 I was surprised how much my father had learned in the last 10 years. Now at 79, I know nothing ! So education is nothing more than a progressive discovery of our own ignorance."

Why Public Expenditure on Higher Education?

K. K. Balachander*

After World War II, many countries began to place greater emphasis on raising the educational level of their people because of the realisation that education was the most powerful instrument of economic progress and social transformation. It was no longer considered a private concern of individuals or parents; it came to be accepted as a collective responsibility of the community. There was also a general agreement that the planning, financing and development of higher education should not be left exclusively in the hands of the private agencies/bodies. The absence of Government support, it was thought, would lead to a severe contraction in the supply of higher education.

The principle that Government should assume an important role in the financial support of higher education, directly or indirectly, has been firmly established over the years in many countries, especially in developing ones—although there still exists disagreement upon the extent to which this provision should be made. Consequently, there has been a rapid rise in public expenditure on higher education; the increase has been more pronounced from late fifties when economic thought brought into focus (again) the investment aspect of education.

The devising of appropriate methods of financing higher education was treated as a 'second-order' problem in the early discussions on the role of higher education. Enough attention had not been paid to the down-to-earth problems of how to share the growing higher educational expenditures between the Government (or the tax-payers) and the students/parents. During the last few years, there has been considerable discussion, mainly among economists, about the pattern of financing education at higher levels. In this context, a historical review of the reasons for Government action in the provision of higher education is appropriate.

Various economic, social and political arguments have been put forward to justify public intervention and expenditure in the higher education field. The greatest hardship which educational researchers operate under is the lack of a clear specification of the exact reasons for providing public finance to higher education. An attempt has, therefore, been made to set out below some of the reasons, both social and economic, that are found generally acceptable in many societies for Government intervention. The discussions will be confined to the 'need' for State intervention (and expenditure) of some sort, or in other words, why Governments should provide any subsidy at all for higher education, and not with the 'size' or 'extent' of it.

II

ARGUMENTS FOR PUBLIC INTERVENTION

1. Disadvantages of Market Forces

In a competitive system that government is the best which governs the least. The market mechanism—or the 'invisible hand'—can be expected to ensure optimal allocation of resources if certain conditions such as freedom of choice, competition, profit maximisation, perfect knowledge on the part of the consumers and producers, absence of 'externalities' etc., are satisfied. Insofar as the purpose of such a system is to facilitate individual decision making, the function of the State is limited, it being confined only to specify and enforce the rights of the citizens rather than to circumscribe them. Under this system, higher educational facilities will be provided by the private enterprise, and parents/individuals can be trusted to take decisions about the education that they want for their children/for themselves.

There are several reasons why the provision of higher education cannot be left to the market forces and why government intervention is needed :

(a) There will be a divergence between the present and future valuations of goods, e.g. some individuals may place a relatively higher value on the benefits arising from the present utilisation of goods rather than future goods which have uncertain returns. Individuals suffer from defective telescopic faculty, as Pigou puts it. Financial benefits from higher education are remote in time and have a probability dimension. The parents/individuals, if left to themselves, may be poor judges of their long

---

**Secretary-Technical Coordinator, Department of Economics, University of Bombay, Bombay-400 098.*

term interests. The family has manifest deficiencies as a decision maker in this area, and it is plausible to expect also some correlation between the extent of these deficiencies and the amount of education received by parents. The government may not be able to compel the people, but it may at least be able to shape their attitude towards higher education. The government can also keep the people fully informed about the long term benefits that they can obtain from higher education.

(b) Another reason for public concern is the inability of individuals/parents to finance higher education. If higher education is treated as an activity of purely personal concern, the parents/individuals will be expected to pay the full cost of it. and the lower income families/individuals may not be able to take advantage of it. Thus, in a competitive system, higher educational institutions/establishments will have a natural tendency to be biased against the lower strata of society, and this will raise serious problems of equity. The whole system may, therefore, get dominated by upper class values, thus reflecting class differences. Besides, in a poor family, the pressure upon the individual to augment family income, foregoing investment in his own education, may be enormous. Government intervention can ensure that no student potentially capable to benefit from higher education is excluded by lack of finance or for any other reason. Philanthropic acts of various individuals/organisations/trusts might help students or institutions, but it is likely that the bulk of such help will go to producers (higher educational institutions) directly rather than to consumers (students) who may be poor as the objective of such philanthropy is to foster or promote the activity rather than encourage some individuals.

(c) The private enterprise, which is motivated by quicker monetary profits, may not naturally, by itself, take interest or initiative in investment in education as a whole which has become more lumpy, and is characterised by fairly long gestation period than many other types of capital formation. The Government is better placed in this respect as it will take a long term view and can come forward with needed funds.

(d) Since the market tends to be imperfect, provision of higher education may get concentrated in a few hands, and there will be only limited number of institutions. The problems of local monopolies may, therefore, arise. If the type of competition that arises is imperfect in nature, the price of educational services may also rise. The possibility of these monopolistic tendencies in the provision of higher education may thus constitute another strong reason for public intervention as in the case of any other goods or services. In certain areas, the Government can break up discriminatory monopolistic situations controlled by private bodies/foundations by subsidising new initiatives in that areas.

(e) Many economists talk of education as an 'industry' and have attempted to apply to it the tools of analysis of the industry such as the concept of unit cost, efficiency, productivity, waste, etc. According to Coombs and Hallak, the widely held promise that because education is not sold in an open market and does not have a profit and loss statement like a commercial business, it is thereby exempt from the principles of efficiency, cost consciousness, planning, etc., is wrong. Even though cost analysis is a relative new comer to most educational systems, abundant evidence of its practical value is already available from recent experience in a variety of countries. The size (in terms of enrolment) of a higher educational institution, especially, is considered as an important factor in determining the (institutional) cost per student; there is a minimum size below which each type of institution cannot operate economically. Besides, as the institutions are not all similar in their coverage and objectives, such differences will affect the desirable size of the institutions concerned and may carry with them different requirements of staff, students, library and laboratory facilities, equipment, etc. There must be a minimum of infrastructural facilities (different for each type of institution) if good standards are to be established. All these factors have to be taken into account by those who are responsible for policy in the higher education sector.

If like firms/industries, higher educational institutions are assumed to be enjoying economies of scale, as the size (enrolment) grows, average costs begin to decline till the facilities originally created are fully utilised. In other words, higher educational institutions can exploit economies of scale upto a certain size. Expansion in enrolment can be expected to be associated with a continuing reduction in institutional cost per student until this optimum point is reached. If the institution is sub-optimal in terms of enrolment, it suggests that the unit cost is likely to be high, and that there is still scope for enrolment. Thus what may be expensive on a small-scale may be economically feasible on a large scale. There may be a U-shaped cost curve operating in higher educational institutions too like firms/industries.

Public intervention may have implications for the economic efficiency of higher educational institutions through their effect on enrolment. If Government grants can sufficiently stimulate enrolment in sub-optimum institutions, then they could contribute positively to economic efficiency. Private sources of finance are severely limited and may not be able to make (alone) a positive contribution towards increasing the efficiency of institutions by improvement in the above direction, and creating a more congenial atmosphere for balanced development of all institutions. When Government assistance is made explicit to those who are responsible for running the institutions, they can plan future activities well in advance. Once the infrastructure is brought into being, the Government can insist that it is used as near to full capacity as possible. Besides, as ultimately the public has to bear to some extent the cost of wrong decisions, the Government may naturally go into the whole issue of locating higher educational institutions from the angle of availability of students and economic viability.

(f) Maximisation of profit is the basic motive guiding decisions in industry/firm wherein the problem of 'externalities' does not exist. Since higher education benefits not only the individual recipient but also the community as a whole, the application of the market principle in its investment decisions becomes difficult. Although the benefits that the society derives from a well educated populace are difficult to quantity, they are nevertheless important. Individuals/families/private enterprise, if left to themselves, may demand or provide less education than its economic-social value to the society; hence it will be underproduced (or will be less than optimum) in the absence of Government intervention. This issue of societal (public) benefits is discussed more elaborately below.

2. Societal (Public) Benefits of Higher Education

Higher education confers not only direct benefits upon individuals/families (such as higher life-time earnings, opportunities to obtain still further (continuous) education, great physical and mental dexterity, greater willingness to take risks and launch out into new enterprises or new jobs, more chances to accumulation of capital, hedging against the vicissitudes of technological change, increased mobility, enjoyment of education per se, etc.), but also indirect external benefits on the society as a whole which take diverse forms. Because of the existence of these societal benefits and their special characteristics, decisions about higher education provision cannot be left to decisions of private individuals or groups or enterprise; the role which the private sector alone can play in meeting the above needs is very limited.

The literature dealing with the societal (community) benefits, their nature and their implications, is extensive. Weisbrod has classified them into three categories : (i) residence related benefits, (ii) employment related benefits, and (iii) benefits to the rest of the society. The residence related benefits can be identified mainly with school education. The employment related benefits state that the higher education of some employees will raise the productivity of others. The importance of this effect, as O'Donoghue observes, depends on higher education developing the properties of flexibility and adaptability since it is these qualities which rebound to the advantages of other employees in cases where production involves the cooperative effort of a group. The employers too benefit from the education of their employees as it would be difficult and expensive for the former if they had to work with an illiterate and untrained labour force or had to train and educate them.

The third category of effects on society—and this is the most important and relevant to higher education—refers to the beneficial effects that 'research' activities may have on the productivity of workers. These activities are a means of increasing the output per worker, whether they are achieved through introduction of new products, new production methods or through more indirect measures such as improvements in health or working conditions. The case for research, which is associated with higher education, needs to be discussed perhaps in greater detail as it provides a strong argument for Government assistance to higher education, especially in the cases of universities and research institutions.

The Contribution of Research

The technological gap between different parts of the world is wider now than it was before and late comers are in a hurry to catch up with the advanced nations. The refinement of knowledge is a continuous process particularly in the sphere of technical education. Special safeguards have, therefore, to be taken against obsolescence in information and technology. No country has a chance of entering the modern technological world without research and development (R & D), organised on a large scale. Fundamental or basic research (apart from applied and adaptive research), by its very definition, is an input for further research. The demand for continuing research of such a type is bound to grow. As Vaizey has observed : "The rate at which new ideas and new techniques of production can be embodied in physical capital determines the rate at which the economy as a whole can advance. This then is one clear contribution which is made by education to economic development, because it is from higher education, and from research establishments, that new ideas and techniques flow". Research and development activities have many links with higher education; they are inextricably intertwined as Marshall's 'knife-blade and handle'-perfectly complementary. Traditionally, the tendency had been to regard inventions as something which were the fruits of creative genius. It is now realised that much of the research is the outcome of team work, the great bulk of which being carried on in universities and research institutions.

Fundamental or basic research, having no immediate pay-off, has to be supported either by the Government, or by private enterprise. But the latter, motivated by immediate profit, may tend to invest too little on it. Besides, the conducting of it involves a high cost. As the benefits of such research to society are so large, reliance only on private enterprise may be undesirable; its provision may tend to be below the socially optimal levels. It is only proper then that the Government should play a major role in organising and financing research as it is better placed in this matter and can take a longer term view in the interest of the community.

Research oriented universities are among the major contributors to the advancement of knowledge. They not only play the role of providing a continuous flow of research results, but also supply the highly skilled personnel needed for R & D activities in other sectors. These institutions can be a convenient mechanism for discovering and cultivating potential talent, and at the same time provide a congenial atmosphere for conducting research in those areas that will foster civil, cultural, technical and scientific progress. Their role has also been more important because of the complementarity between teaching and research. The scientific achievements of many advanced nations have been made possible following the restoration of their universities as centres of research and training. The Governments of these countries had extended, and continue to extend, liberal financial assistance to higher educational institutions like universities (and research institutions) to conduct research in many disciplines including humanities. Instead of dependent just on fee and other private contributions, a university getting Government assistance is clearly in a much better position to advance research.

The Equity Aspect

Two other leading societal benefits—equality of opportunity and improved income distribution that can be expected from higher education need some elucidation. These two issues have become prominent in recent discussions and there is an examination anew of the same in the changed circumstances compared with earlier times in many countries. These are seen as two important components of 'rights' and 'rewards' which comprise life chances in any society, and have been recognised as the two main justifications for Government intervention in the higher educational sector. The main objective of this egalitarian thrust of higher education is that the less-advantaged social groups should have equal access to higher educational institutions. The hope is that these groups would then enjoy readier access to the more rewarding (and rewarded) upper rungs of society which previously had been predominantly the preserve of their more privileged contemporaries. The longer higher education continues to be the privilege of the few, it is argued, the longer it will be before it could be the wellspring of development for the nation as a whole. It is not enough to create the top; opportunities should be open for everybody with ability to reach the top.

(a) Equality of Opportunity

Equalising opportunity for higher education is considered as one of the examples of 'spill-over' effects made possible by large public expenditures on higher education. The concept crops up in almost all discussions in financing of higher education now. Theoretically, as Marshall has pointed out, one starts here from the assumption that every individual is a candidate for every position in society, so that public policy must aim at eliminating the effects of differing social environments on the critical turning points in people's lives. In other words, the Welfare State aims at equalising its citizens' life-chances, freeing the natural order of human differences from the arbitrary influence of differing social environments. The practical implications are of course vast. The ability to profit by higher education is spread over all classes of people; hence all the aspirants must be enabled to climb the educational ladder (and in all regions). If needed, latent or slow development talent must also be fostered and brought to fruition so that all are stretched to the maximum of their potential.

That no individual, whatever be his economic and social status, sex and rural-urban differentiation, wishing to have higher education should be denied the opportunity is the avowed goal of the educational policy makers in all countries, especially the developing ones. Greater efforts, therefore, must be made to enlist the socio-economically backward sections of the population in higher education and thus attain equity in economic opportunities over time. If we go back into history, we can find that the development of higher education tended to be justified in terms of the provision of what was called *a liberal education* for the 'elite' than in terms of training for careers. Higher education proved more attractive later when it was known that if pursued, it would be directly or indirectly of some advantage in getting employment or building careers. This as well as the wind of egalitarian spirit that was blowing all over the world shifted the emphasis in favour of democratisation of higher education.

Inter-State and Inter-Regional Equality : Equality of opportunity will not be meaningful if there are unequal higher educational facilities in different states/regions in a country. The access to higher education should be enjoyed by prospective participants in all parts of the country equally. If large distance in this regard exists between states and regions, there would be a sense of discontent. As educational development leads to economic improvement of the states/regions too, disparity in its spread may result in economic disparity in the long run. In a federal system, these discrepancies are likely to be wider. The revenue in one state/region may not be sufficient as its tax-capacity will be limited. These differences in fiscal capacity should not act as barriers to the achievement of uniform levels of higher educational services anywhere in the country. The people in less higher educationally advanced states themselves may bring pressure on their governments to provide better higher educational services, and the example of the more advanced states in this regard may have provided rising expectations among them. Besides, the fact that higher education is being increasingly considered as a 'right' may prevent the State authorities from raising substantially the student charges to meet escalating costs. The costs that have to be met by the States through their general revenues may therefore be heavier. As a consequence of all this, there is likely to be increased demand for aid from the national government (which may be appropriating most of country's revenues) by the states. The former may have to step in with additional aid, or other means, to help them accomplish their task which would also encourage or facilitate a far larger total expenditure by many states. If inter-state equality in higher educational spread and expenditure has to be achieved, the Government (at the national level) should have a clear idea of the present state of higher educational development in different regions, and their conflicting interests and difficulties. It may be necessary to have a differential system of Central financial aid to prevent the occurrence of wider disparities with regard to provision of higher educational services, standards and expenditure between rich and poor states. Without Government effort (Central and State), particularly the former, it will be difficult to equalise higher educational opportunities all over the country.

(b) Improved Income Distribution

The desire for equality of opportunity ultimately leads to the income redistributive effects of higher education. In a modern society, higher education appears to be one of the most powerful ways of reducing or avoiding the growth of income and wealth disparities. The belief that advancement in higher education has important implications for the distribution of income is widely held: as mentioned earlier, the more educated and skilled a person is, the greater the chances of enhancing his earning capacity.

If higher education is priced to the public at its full cost, as it would be in the absence of any public expenditure, it is argued that only those who can afford will buy it, thus leading to its unequal distribution in the society in course of time. The stability of the society will be disturbed if it consists of people who are educated and rich and whose riches go on rising, and a large portion of poor who have no education and continue to be poor. The income redistributive effects of higher education provide the rationale not only for keeping its accesses open, but also extending government subsidy. (There need not however be a blanket policy of Government subsidy as far as higher education is concerned, in which case there may be a decrease in the contribution from all students irrespective of the economic background).

Whether public expenditure on higher education will lead to improved income distribution also depends on ensuring that public expenditures or subsidised tuition fees attract sufficient number of people from the lower-income groups, who, as a result of their higher education, will earn higher incomes. For social and economic reasons, many intended beneficiaries may be apathetic towards the higher education provided, or not consider it worth the opportunity costs involved. **Just extending educational opportunities with equal sized subsidy, especially in a world of unequal incomes may not contribute to improve the distribution of income.** In other words, this form of Government assistance given on the sole criterion of attendance in a higher educational institution would mean that for some students, the subsidy represents money they or their parents could afford to spend; for others, it will be found to be inadequate, and thus preventing them to take advantage of educational opportunities. Students from the lower strata may, therefore, be able to take advantage of higher education only if some really positive discrimination in their favour is extended by the Government.

Other Societal (Community) Benefits

Another benefit which is considered to be accruing from education in general, and higher education in particular, is the spread of 'information' which is valuable for a political democracy. Without higher education, the value of books, journals, newspapers and similar information media would dwindle. This effect assumes special importance in view of the explosion in knowledge which has now become a fact of life. Becker refers to the social gain of direct taxes paid by individuals from the additional income associated with education. Mobility among the people is one of the powerful means for the creation of an open society with a continuous interchange of scholars, teachers, professional and skilled personnel. Higher education provided for the people of each local community benefits the country at large because of the mobility of those who are thus educated. It has recently been found that countries which make higher investment on post-secondary education, particularly with agricultural and technical specialisation, can achieve certain comparative trade advantages.

Another leading argument for the Government taking more interest in higher education is that educational attainment has an influence on family limitation. This virtue of education had long ago been highlighted by Ricardo, Malthus and Senior. Higher education brings with it an enhanced sophistication regarding biological processes and knowledge of methods through which excessive growth of population (which is typical of countries at the low-end, and at the middle, of the development spectrum) can be checked. Several cross-sectional studies using either national or sub-national populations have demonstrated an inverse relationship between education and fertility (although there are some exceptions and caveats to this general finding). According to these studies, an illiterate or barely literate individual tends to be more fertile than those who are exposed to higher levels of education. In accordance with educational advance the relative value of child declines and the child-spacing increases. This happens because higher education delays the marriage of both men and women by increasing their chances for paid employment. It also reorients family members to discover non-familial and desirable goals such as further studies, professional recognition, higher occupational status, power, income and so on, which act in turn as a check to birth-rate. Thus it is argued that if a country desires to reduce population explosion, its Government should make all efforts in raising the educational level of the people, especially younger women and also of the less-privileged.

To sum up, the concept of 'external' or 'societal' benefits is so pervasive and diffused that the list of examples could be extended further. The nature of the special characteristics of these benefits is however, less often elucidated in a sufficiently precise manner for its implications for higher education policy. The technical evidence adduced to support these propositions is also not overwhelmingly persuasive. These cannot be captured in the rate of return calculations for which it is the 'real' effects (those which give rise to monetary consequences) that are relevant. Even though many of these invisible benefits defy monetary valuation, to the extent they are believed significant, they reinforce the argument for public action. But there is scope for disagreement as to **how much** and **what type** of intervention is optimal. The inadequate delineation of such benefits, prevents a quantification which could be used as a basis for fixing student subsidies. There is presently no precise way of arriving at a **particular amount** which should be paid to the student to reimburse him for the stream of social benefits he/she will be expected to generate.

The financing of higher education, thus, raises many perplexities due to these societal benefits, many of which 'extra-economic' (objectives) that are however considered significant. They are embarrassing to the economist, since thehries say little about them and he has few teconiques for measuring them. As Schultz has aptly summarised it :

> "When this box is open d (social benefits), we are in trouble. There is so little agreement on what the box contains. It is hard to distinguish between fact and measuring these benefits has been grossly neglected. No wonder that claims and counter-claims are the order of the day. **Most of us have a vested interest in higher education** which is hard on objectivity". (underline ours).

III

FINANCING OF HIGHER EDUCATION THE PUBLIC-PRIVATE BALANCE

We have, in the earlier sections, discussed some of the major justifications for public expenditure on education. These discussions provide a convenient framework against which we can set out what may be in general the Government's view of the financing of higher education.

School education, especially at the elementary level, has been recognised as a fundamental right in almost all countries. The Government has taken over the responsibility of the costs on it. It has been made free and compulsory, and the extension of this facility is no longer questioned. Difficulties arise when it is extended to the higher education level. At the upper levels, the costs are many times more than school education, and will go on increasing as they expand. **The economic problem of how to distribute the costs at this level becomes therefore more urgent.**

As discussed earlier, higher education, though confers benefits on the individual (user), also benefits the society as a whole. If it is left to individuals and the market mechanism to provide the necessary resources, its provision would be less than optimum, or there would be underinvestment in higher education from the point of view of society Secondly, there is the important question of distribution of higher educational opportunities. If higher education is a form of investment which results in higher lifetime earnings by individuals, then to give opportunities for it only to those who could afford to pay would mean preserving or aggravating the existing inequalities of income in the future. Every effort should be made to ensure that financial barriers do not prevent the poor but meritorious students from entering and completing higher education.

It becomes, therefore, necessary for the Government to play an important role in the financing (and development) of higher education, or **higher education merits some intervention by it.** It has to be provided at 'prices' that do not reflect the actual money spent on providing it. The incomes of thoso who have received a subsidised higher education can also later be raduced by taxation. This is an attempt of the community to achieve a lower price for 'externalities' or societal benefits. Thus, it is evident that financing of higher education involves a transfer of income from the rest of the community (which benefit indirectly) to those pursuing higher educatin, and a charge (fees) on the students, the direct beneficiaries. Its supply is, therefore, financed both by tax resources and fee resources. In practice, a 'mixed' system of higher educational financing consisting of a combination of government grants and private charges (fees)—a blend of public and private funds—has been in vogue in almost throughout the world (except in Communist bloc of countries and a few countries like say Japan and Philippines). This is considered the best arrangement in terms of equity and efficiency.

The crucial question still remains : what should be the relative **balance** between private and social benefits, and what level of public subsidy is necessary to ensure sufficient investment in higher education in view of the tangible and intangible benefits it produces for society ? Any kind of cost sharing arrangement between the tax payers and the consumers of higher educational services can be devised. A decision concerning the 'exact' (proportion of) sharing of the expenditure between the Government and the individuals/families, or determining the size of the subsidy per student/institution, is perhaps a social-political one reflecting broadly the expected benefits of higher education (both societal and private) and partly on alternative uses of public funds, on relative priorities between higher education and lower levels of education, etc. These preferences may not be similar in all the countries; they may also change with time within a given country; and they may be different according to the level of education considered. Various countries have different patterns in respect of the 'balance' or the 'mix' of public and private contributions towards expenditure on higher education.

Anyway, in a situation of steady expansion of higher education, Government funds alone may be found inadequate. If revenue availability is the prime concern, then mixed financing in the form of fees, etc. and Government grants will generate more support by the society for higher educational development than either of the 'pure' systems. Besides, in a mixed (or multi source) system, apart from contributions made by Government and individual users, contributions towards expenditure may also flow from other sources (private)—by way of donations, endowments, gift, etc., made by voluntary bodies, trusts, private individuals, and so on.

There are many other advantages in this kind of mixed financing :

(i) This will ensure some freedom from State interference unlike in a Government-provided higher education system, and facilitate a more flexible attitude.

(ii) Government grants-in-aid may make sure that the expenditures are pushed far enough to take advantage of social benefits; since the individuals/families will share some expenditure by way of fees, this will minimise the tax-payers' resistance to public handouts to individuals/families.

(iii) It helps to raise not only larger resources, but the availability of these resources is less likely to get affected in times of financial stress because of the possibility of balancing shortfalls in one source by increased efforts under others.

(iv) With the initial thrust provided by the Government through grants-in-aid, the total higher educational efforts may get stimulated in the long run on account of the effect of higher education on national productivity and income and thence on the capacity to spend on higher education. Thus, there can be a particular type of multiplier (effect of educational expenditure on productivity and income) and accelerator (effect of increased income on additional higher educational expenditures) effect operating in such a planned system of higher education. This may be specially applicable in the case of developing countries (P.R. Panchamukhi).

(v) The wonderful effect of fee-income upon attention and energy would ensure a new level of academic performance on the part of the teachers as well as the students (In fact, the budgeting of fees was started in India during the British period as an expression of **the principle that people do not value anything which is given free and that the payment of fees is an indication of seriousness of purpose on the part of the student or his guardian** (Wood's Despatch 1854).

Conclusions

The debate on financing of higher education is no longer confined to the existence, but the desired extent of public subsidy, which, in turn, will determine the charges accruing to private persons. All the above arguments justify some form and level of public subsidy. While the economic approach to the problem limits itself to such broad alternatives as investing more or less on higher education, or desired types of higher education, the policy makers have to tackle the down-to-earth issue of deciding the amount of expenditure burden to be shared between the Government and the users.

Higher education serves two masters : the society at large and the individual self. It is obligatory for both to see that the system is sustained over time. A suitable public finance package wherein the interests of, and gains to, the two parties are well-recognised and properly balanced should, therefore, have to be devised. This kind of a truce between the society and the individual beneficiaries could work reasonably well if both parties possess adequate information and behave with maturity. There has to be a realisation especially on the part of students, as well as the parents, that what they are undertaking is significant and important not only for themselves but also for the society, and that the effort made to carry out a programme of higher education has both its costs and its rewards. ❑

REFERENCES

1. Adiseshiah, Malcolm, S., "Educational Financing", *Lead Paper presented at the Seventh Commonwealth Education Conference*, March 1977 (*Bulletin*, Madras Institute of Development Studies, Vol. VII, No. 8, Aug. 1977)
2. Balachander, K.K. *Government Grants and Higher Educational Development with special reference to Indian Experience Since Independence* (Ph.D. thesis), University of Bombay, June 1985 (to be published); Higher Education in India : Quest for Equality and Equity, *Mainstream*, Aug. 2, 1986 : "Resources for Higher Education ; The Role of Different Sources and Their Dynamics", Paper Presented at the J.P. Naik National Seminar, Indian Institute of Education, Pune, Sept. 1986; "Higher Education : Who Pays, Who Benefits ?" *Economic Times*, Oct. 14, 1987.
3. Becker, Gary, S., "Underinvestment in College Education ?" *American Economic Review*, Proceedings 50, May 1960.

4. **Blaug, Mark (Ed.)** *Economics of Education* (Vol. I & II) Penguins, 1968.
5. Burn, Barbara, B., *Higher Education in Nine Countries* (A General Report prepared for the Carnegie Commission), McGraw Hill, 1971.
6. Carnegie Commission on Higher Education, *A Digest of Reports of the Carnegie Commission on Higher Education* (Chapter 18 : "Higher Education : Who Pays, Who Benefits, Who Should Pay ?" McGraw Hill Book Co., Jue 1973.
7. Carter, Charles, F., "Costs and Benefits of Mass Higher Education", *Higher Education*, Vol. 2, No. 2, May 1973.
8. Coombs, Philip, H., "The Adjustment of the Educational Structure to the Requirements of the Economic Development" in *Education and the Economics of Human Capital*, Wykstra, Ronald, A. (Ed.) The Free Press, New York, 1971.
9. Coombs, P.H and Hallak, J., *Managing Educational Costs*, Oxford, London, 1972.
10. Craig, Subblebine, W.M., "Institutional Elements in the Financing of Education", *South Economic Journal*, July, 1965.
11. Crew, Michael, A., and Young, Alistair, *Paying by Degrees*, IEA, London, 1977.
12. Eckaus, Richard, S., *Estimating the Returns to Education : A Disaggregated Approach*, A Technical Study sponsored by the Carnegie Commission on Higher Education, McGraw Hill, 1973.
13. Forte, Francesco, "Local and Central Government Problems in the Financing of Education" *in Financing Education for Economic Growth*, OECD, Paris, 1964.
14. Hansen, W.L. & Weisgrod, B.A., *Benefits, Costs and Finance of Public Higher Education*, Markham Pub. Co. Chicago, 1969.
15. Haq, Ehsanul, "Education and Demographic Change", *Social Change*, Vol. 8, No. 2, June 1978.
16. Hu, Teh-Wei, Kaufman, J.C., Lee, Maw Lin, Stromdorfer, Ernest, W., "Theory of Public Expenditure for Education" in Wykstra, Ronald, A., *Education and the Economics of Human Capital*, The Free Press, New York, 1971.
17. Jallade, Jean-Pierre, *The Financing of Education : An Examination of Basic Issues*, IBRD, Working Paper No. 157, July 1973 ; "Financing Education for Income Distribution", *Finance and Development*, March 1979, Vol. 16, No. 1.
18. Jimenez Emmanuel, "The Public Subsidisation of Education and Health in Developing Countries : A Review of Equity and Efficiency," *Research Observe*, The World Bank, Vol. II, No. 1, January, 1986.
19. Kothari, V.N. and Panchamukhi, P.R., *A Survey of Research in Economics in India*, ICSSR, Aug. 1975.
20. Lakdawala, D.T. and Shah, K.R., *Optimum Utilisation of Educational Expenditure in Gujarat*, Monograph Series-5, Sardar Patel Institute of Economic and Social Research, Ahmedabad, 1978.
21. Malthus, Thomas R., *An Essay on the Principles of Population*, Everyman's Library.
22. Musgrave, R.A., *Theory of Public Finance*, McGraw Hill, New York; "Notes on Educational Investment in Developing Countries" *in* OECD : *Financing Education for Economic Growth*, Paris, 1964.
23. Nerlov, Marc, "On Tuition and the Costs of Higher Education : Prolegomena to a Conceptual Framework", *Journal of Political Economy*, Vol. 80, No. 3, Part II, May/June, 1972.
24. O'Donoghue, Martin, *Economic Dimensions in Education*, Aldine-Atherton, Inc., Chicago, 1971.
25. Panchamukhi, P.R., *Economics of University Finanaces : Basic Principles and Practices*, Centre for Multi-Disciplinary Research, Karnatak Historical Research Society Dharwad, 1977; "Decision-making in Education : Some, Issues", *Economic and Political Weekly*, Vol. V, Nos. 3,4 and 5, *Annual Number*, Jan. 1970; "Fee Financing of Education in India" *in Studies in Economic of Education and Fiscal Economics*, Vol. II, 1974-77, Research Unit in Economics of Education, Department of Economics, University of Bombay, 1977.
26. Pandit, H.N., "Economic Approaches to Investment Decision-making in Education". *Indian Educational Review*, Vol. 5, No. 1, Jan. 1970.
27. Peacock, Alan, T. and Wiseman, Jack, *Education for Democrats*, Hobart Papers 25, Institute of Economics (IEA), Landon, 1964; "Economic Growth and Principles of Educational Finance in Developed Countries" in OECD : *Financing of Education for Economic Growth*, Paris, 1964.
28. Pickford, Michael, *Costing University Resources*, Chapter 2, Chatto & Winduz, London.
29. Schultz, T.W., "Resources for Higher Education : An Economist's View," *Journal of Political Economy*, Vol. 76, No. 3, May/June, 1968; "Optimal Investment in College Institution : Equity and Efficiency" in Schultz (Ed.), Investment in Education : The Equity Efficiency Quandry, *Journal of Political Economy (Special Number)*, Vol. 80, No. 4, Part II, May/June 1972.
30. Sharma, G.D., *Institutional Costs of University Education*, Association of Indian Universities, New Delhi, March 1980.
31. Shetty, Nalini, V., "Higher Education in U S." in *Higher Education in India*, Santanam, K. (Ed.), Madras, July 1974.
32. Smith, Adams, *Wealth of Nations*, Modern Library, New York, 1976.
33. Smith, Lester, W.O., *Government of Education*, Pelican, 1971.
34. Todaro, Michael, P., "Education, Migration and Fertility" in IBRD, *Investment in Education : National Strategy Options for Developing Countries*, Oct. 1973.
35. Vaizey, John, *The Economics of Education*, Chapter II, Faber & Faber, London, 1962 ; and *Education in the Modern World*, World University Library, London, 1967.
36. Weisbrod, B.A., External Effects of Investment in Education" in *Economics of Education-I*, Blaug, M. (Ed.) Penguins, 1968.
37. West, E.G., *Education and the State : A Study in Political Economy*, IEA, London, 1970.
38. Windham, Douglas, M., "The Efficiency/Equity Quandry and Higher Educational Finance", *Review of Educational Research*, Vol. 42, No. 4.
39. Woodhall, Maureen, "The Arguments for and against Loans" in Baxter, Corolyn, et. al., *Economics and Education Policy—A Reader*, Open University Set Book, Longman in association with the Open University Press, 1977.
40. World Bank, *Education* Section Policy Paper, Washington, 1980.

ILO PUBLICATIONS

Offer you a wide range titles on :

Management, Employment & Development,
Social & Labour Issues and others.

Our recent publications :

Combating Child Labour

The Emerging Response to Child Labour

Women Workers : Protection or Equality

Assessing Women's Economic Contribution to Development

World Employment Review

Catalogue available on request.

Please address your enquiries to :

INTERNATIONAL LABOUR OFFICE
7, Sardar Patel Marg
New Delhi-110021 Tel. 3012101-02-03

With Best Compliments

From :

Vijayalakshmi Printing Works

Specialists in :

PHOTO-TYPESETTING ☐ OFFSET PRINTING ☐ COLOUR JOB ☐ ANNUAL REPORTS
SOUVENIRS ☐ POSTERS ☐ MAGAZINES ☐ FOLDERS......IN
ENGLISH ☐ HINDI ☐ MALAYALAM ☐ TAMIL

K-6, MAIN BAZAR, LAKSHMI NAGAR, DELHI-110092.
PRESS : 2242745 2240353 Res. : 2242387

Madhavan Paper Co. Pvt. Ltd.

N-100C, CONNAUGHT PLACE, NEW DELHI-110001
Phone : 3 3 1 3 2 5 8

New Technologies Vs Lecture Tradition in Higher Education

Beena Shah*

Eversince the industrial revolution began quickening the pace of technological advance, forecasts have appeared predicting a revolution in higher education that must surely transpire as a result of new technology (Entwistle, Odor & Anderson 1987). Yet the application of technology to university instruction has received *only intermittent and nominal attention* by university faculty and administration (Becker 1986, & Tucker 1985). In fact, the gap between actual and potential uses of the emerging technologies seems to be widening.

The expanding capacities and capabilities of computers and microprocessors alongwith a concomitant reduction in their cost of acquisition or access, the appearance of interactive cable television systems, the advances in fibre optics that offer higher quality and lower cost data transmission and tele-conferencing, and the staggering array of information technologies currently in place and projected; all of these developments have been receiving only slight attention among our institutions of higher learning; where these technologies have been examined were viewed as new dimensions of library services. While this attention is welcomed, it remains and application is still significantly removed from instruction in higher education. This article offers an explanation as to why the potential of the emerging technologies in college and university teaching has not been more widely exploited ?

Among the more common reasons cited for lack of progress in this area are prohibitive costs and faculty resistance to change. A closer examination suggests these factors to be symptomatic of more pervasive conditions and not root causes in themselves. It is the argument of this article that, by and large, the organisational attributes and dynamics of the college and university that have evolved since the late 1800s or early 1900s generally discourage innovative applications of new technologies in teaching. The degree to which the pervasiveness of these adverse conditions is understood is a necessary precondition to affect change in an institution.

The Lecture

The dominant instructional strategy used at higher education continues to be the lecture. Why, as we approach the close of the twentieth century ? Do universities continue to use a teaching technology that *predates the invention of movable type nearly* one half of millenium ago ? There are several explanations. First is simply a predictable resistance to any change (Sarason 1982). The Greeks objected to the introduction of writing into education because they thought it undercut the dialectic method. Any proposed change means some uncertainty, and resistance is an expected consequence. The questioning dimension of resistance, is the change valuable or worthwhile, is an important part of any innovation process ? it must be expected and accommodated.

A second reason that the lecture method continues to dominate in higher education is that until recently, technological alternatives had not been widely available or affordable. The early, expensive computers that filled rooms were not the realistic alternatives that today's microprocessors offer. However, unless this reason be given too much weightage, we should recall that the telephone has been available for a century and television for over 30 years—both are without widespread adoption in higher education.

A more fundamental reason for the lecture's preeminence lies in the paradigmatic stature it has achieved in higher education. Since its adoption from Germanic tradition in the mid-nineteenth century, the lecture has been principal and venerated means of transmitting knowledge from scholar and perpetuated both the knowledge and its mode of transmission. The lecture came to represent tradition in general (and perhaps recalled a particular role model specifically), it symbolized the prestige of scholarship, and aside from augmenting it with recitation, it was all that the scholar knew how to do ? The faculty's tenacious hold on the lecture method in the face of new alternative teaching technologies is in part, a continuation of respected academic tradition.

Another important reason for the lecture's continued popularity has been its practicability. The enor-

---

Head and Dean, Faculty of Education, Rohilkhand University, Bareilly-243001.

mous growth of higher education institutions in the past three decades strained limited faculty resources. It was simply easier to accommodate the students boom by lecturing the hundreds of students in an auditorium. And in future repetitions of the course, a revision or update of the original lecture consumed less time, thereby providing more time for research or consulting. The lecturer, then, has come to represent the convergence of role, norm, and value in the teaching faculty member. However, faculty account for only part of the explanation. An understanding of the student's goals and attitudes is centrally important to incorporate new technology in college instruction.

Student Influences

The university/college student brings to the classroom a respect for the authority and power of the faculty, a set of goals, and a unique learning style. The student will generally accept what the faculty suggest, and will perceive both the content and the way it is transmitted as legitimate. It is not to say that the student is uncritical, only that he or she is *generally* deferential. This trait works in favour of perpetuation of the status quo regarding the lecture as the dominant teaching transmission technology of the college. To date, the challenges raised by the students have related principally to course content and not the way it was presented.

Students' goals and expectations are important, because they involve not only immediate content and interest but also long range occupational objectives. The increasing prevalence of utilitarian motivation for college education over the last decade as well as increasing costs and decreasing student aid, have specific implications for the classroom. Students want to learn what they need to know, and they want to learn it efficiently. Further, the upward age shift in the student population, underscores the importance of greater recognition of principles of adult development theory in college instruction, most notably that students may have widely differing learning styles.

And, finally, today's college student has grown up with high technology, playing an increasing role in his or her life and education. The product of this mixture of conditions is a student who has focussed the goals, who is a sophisticated consumer, and who has a lower threshold of tolerance for how his or her class time is spent than his or her predecessors.

Student's respect for faculty is increasingly based upon the student's perception of the faculty's ability to facilitate his or her goals, rather than the faculty's arbitrary position distinction. A change from the vertical relationship of teacher lecturing to student to a more horizontal relationship where the faculty is the superior resource for the student's goal achievement may be an outcome of adopting new alternatives in teaching. To understand these changes in the student population, particularly their emerging expectations, is essential to imposing a strategy for change.

Incentive Structure

As central as teaching appears to be in the college and university, it is research, not teaching, that carries the dominating influence in the institutional incentive system. This brings us to the fundamental explanation of why new technology has not achieved more widespread application in university instruction.

A review of most faculty workloads indicates that the preponderance of their time is reportedly devoted to teaching, while a review of most promotion and tenure criteria indicates that research productivity is the measure of excellent performance. More specifically, the publication of a book or of an article in a respected referred journal represents the epitome of academic achievement. Publication, as with the lecture, has achieved paradigmatic stature and reflects, at least in terms of institutional recognition, the most highly valued function of higher education faculty. Were this strictly a condition of a single institution the change might not be as complex ? However, most institutional incentive criteria merely reflect "industrywide standards of performance and prestige". Where a private business may construct performance expectations and incentive systems unique to its objectives, the university tradition of achievement spans time and geography interlocks faculty across disciplines and institutions. While this enriches the sense of community, heritage, and prestige, it also presents a formidable obstacle to change.

The residual effects of the research emphasis upon the stature of teaching are apparent, as are the implications for encouraging new technology applications to college teaching. Teaching requires substantial faculty time, yet it is not acknowledged as significant function as research. Consequently, attention to teaching and preparation for classes are minimized inadvertently, and ways are sought to ransom time for the more professionally lucrative research, publication and consulting. Unfortunately, the lecture method of teaching accommodates this cycle of events. In addition to the prestige of peer recognition, a secondary benefit may accrue from the publication orientation book royalties. In a profession where peer esteem and internal satisfaction are expected to supplement humble salaries for one's compensations, it should come as no surprise that faculty would use writing or consulting to improve their financial condition.

All this is not to suggest inordinate concern for money among faculty, but also the pressures for academic survival and achievement, as well as the temptations of prosperity, are great, and that higher educational incentive systems do not encourage behaviour to the contrary. In such an environment, new technology applications in college instruction will be undertaken primarily for the secondary benefits that they will produce. Such an innovation must promise saving of or release from teaching time, or royalties, or the prospect of a publication that may assist the faculty's professional achievement. As long as technological innovation in teaching is a means rather than an end in terms of the institutional incentive system, the pace of exploration and use of these tools will remain slow and intermittent. In addition to the more recognizable parts played by faculty, students, and the institutional incentive system, other aspects of the college and university also contribute, if more subtly, to reinforce conditions adverse to the introduction of new technologies in teaching.

Organizational Constraints

First is the marketing dimension of admissions and recruiting, where the institution and its programmes are portrayed so as to attract a particular kind of student. Second are the funding *liaisons*. In the case of public university, communication with the State Legislature provides rationale for programme support; with the private institution the alumni office and foundation relations are the loci of supportive sub system efforts. Third are the local chapters or subunits of national professional associations which can relate local institutional interests to a broader constituency. And, fourth are the institutional officers and planners. Each of these functions contributes to maintenance of the status quo in regard to technological innovation in teaching.

Recruitment marketing in most universities continues to present the traditional classroom lecture experience as the archetype of college *instruction*. The claim to distinction remains the quality and renown of the faculty (lecturer) and the rich resources of libraries, museums, and so on. This function perpetuates the student's expectation regarding what constitutes appropriate college instruction. It is a subtle, but important communication.

Second is the relationship with the institution's main funding source. It is interesting, but not surprising, to observe that teaching is put forward to legislatures and alumni as a principal activity of the university. The value of research, except in the case of the emerging partnerships with business and industry, is often an elusive and difficult concept to communicate to a sponsor, especially when those sponsors are lay people deciding among competitive requests. Consequently, funding requests go forward citing students' credit hours, faculty students ratios, and so on.

Most of the data bases for the financial reporting and planning of academic programmes have grown up around the lecture as the central instructional technology of the university. Administrators have become quite proficient in manipulating these data to argue on behalf of increased support, continuation of programmes, and even quality issues. They have succeeded in establishing the primacy of the teaching function and the desirability of high quality instruction to the funding sources. This is advantageous for a changed strategy touting the centrality of improvement of teaching. However, the model upon which these arguments have been established is too narrowly conceived to accommodate the variables that may arise from new technology applications to college instruction. This is a technical obstacle to be overcome, but it must be undertaken carefully so as not to jeopardize the established expectations regarding teaching which we wish to retain. It is the language of the arguments that will require updating to implement change (expanding definitions of student-credit hour, full-time equivalent, etc)

The local units of national professional organisations are also subtle but potentially important. They can be powerful reinforcers of tradition within their respective disciplines (History, Anthropology, etc.) or across the broader scholarly community by perpetuating norms, and research and publication emphasis. The extent to which these chapters are influential depends mainly upon the prestige of the institution and its governing members. It is apparent that to the extent this is an influence for the status quo, it may also become an influence for change by disseminating and sanctioning news of innovations.

The enormous numbers of students coming into higher education over the last 30 years precipitated phenomenal quantitative growth; more institutions, more faculty, more buildings. Institutional research and planning in this context functioned to accommodate the growth demands of the environment, and the emphasis was upon plant expansion. In the 1970s as the growth mode gave way to shifts in economics and student demography, a more distinctive function to these offices began to emerge and take a more prominent place in the university. It gained importance because of its contributions to decision strategies regarding reduction and retrenchment. The transformation in emphasis was from accommodating quantitative growth to facilitating qualitative retrenchment. These offices also began to acquire more sophisticated market and policy analysis capabilities. In many instances, these offices are merely feeding back intra-institutional discriptive studies to the university. But where environmental analysis is done with an eye toward institutional change strategies, this office has served an increasingly important function in the university.

The dimension of the university's operation has contributed to the higher education's organisational problem vis-a-vis new technology and instruction in so far as it has facilitated the physical institutionalization of the lecture: classrooms and lecture halls all reflect this. But the changes in the institutional research function along with environmental pressures and offer great potential for their use as a tool for change. Their success, however, depend greatly upon the resources provided to them, the timeliness of their work, and most importantly, the use of their products in the decision process. The locus of that decision making process lies within the institutional leadership, is another major explanatory factor in this argument.

Leadership Within the Organization

While there are certain organisational tasks where administration leads, the complexity and diffusion of authority in the university require that the academic governance be a subtle, interactive process that surfaces consensus and resolves conflict among several formal and informal authorities. Administrative organisation charts reflect a traditional bureaucratic orientation. Democratically elected faculty senates or government nominees represent another element of the decision-making apparatus. A myriad of politically functioning interest groups representing disciplines, interdisciplinary coalitions, and special issues also enter the mix. The reason that institutional leadership has contributed to the persistence of the lecture as the central instructional technology of the university (and subsequently, the lack of interest in new technological instructional approaches), has to do with the traditional role of academic administration.

In the evolution of the academic administration, the management function arose to coordinate the logistical exigencies attendant to instruction. These are necessary, if secondarily important, activities were first performed by the teaching scholars themselves; but as the instructional enterprise grew, the continued rationale for its existence and authority to operate is derived from the teaching function; that is, academic administration's purpose was to provide, unobtrusively, the resources and environment in which higher education took place. That rationale is still touted today, but due to enormous increase in the institutional complexity in response to environmental change, academic management is gaining an even greater ascendancy.

During the great growth period of higher education in the three decades, there was a benevolent aura about the decision making process as the university resolved its conflicts of resource allocation. It was an era of plenty, and the questions were ones of who received the greatest increase, assuming all got some. Administration helped preside over this process and faculty saw them, at best, as facilitators of the process of mass enrichment. The subtle, but steady, accretion of power over resource allocation by administration became most apparent as higher education entered into its era of scarcity. The character of conflict resolution changed from benevolent to malevolent as declining resources dictated programme reduction or, at best, selective enrichment. And the complexity of acquiring the resources and maintaining the institution in this context has reinforced management's importance in sustaining the quality of the higher education experience. These developments have substantially compounded the problems of conflict resolution.

Implications for our question follow. First, administration is in a position to be a powerful agent for change. Second, the strong tradition of faculty primacy, autonomy, and authority remains, and since faculty are cognizant of their increased dependence upon administration in the resource allocation process, great care must be taken in how change involving new technology applications to instruction is introduced. Such a change is likely to be perceived as an intrusion—activity that is distinctly outside administration's purview. Two factors can mitigate this. One, administrators have generally arisen from the faculty ranks, a condition that can provide a base for mutual trust. Also, an argument can be made that such change is in the tradition of administration's support of instruction. Another complication may arise due to academic administration's ascendancy being coincident with the availability and affordability of new technology for instructional use. University administration bears a strong resemblance among many faculties to the operation of corporate industrial management. The adverse relationship between administration and faculty with the widespread rise of collective bargaining on campuses has only reinforced this image. It is but a short step to draw an analogy from corporate management's application of new technology to automate industry with the consequent displacement of many workers. In addition to the faculty's philosophical position that innovation in teaching is outside the purview of administration, they may also be anxious about the potential consequences of such technological innovation.

The Broader Institutional Environment

These aspects of the college and university have distinct characteristics derived from their unique environments. The environment has a multiple effect upon the organisation, affecting every aspect directly and indirectly as each activity influences the other. From this interaction emerges an organisational climate in which new technology applications to instruction are to be introduced. Some of these features have been mentioned above.

While technology in the form of the telephone and television has been widely available for many years, only recently has the escalated pace of technological development begun to present higher education with exotic technologies and with potential teaching uses. Although, the technology is now becoming available, the economic climate for higher education is breeding a conservatism that does not bode well for innovation. Inflation has driven the costs of operating an institution to unprecedented levels. Faculty conservatism derives from concern over possible programme and staff eliminations; and, the pressures for performance along traditional lines to ensure survival tend to override inclinations toward the more uncertain consequences of innovative approaches.

Conservatism also permeates the student population. The cost of education and the pragmatic orientation of students to a career surface mild impatience with anything that does not seem to contribute directly to their employment. But students still respect faculty as the controllers of the credential. The conservatism of the administration and students can also be positive features of the organisational climate. Management's concern for cost-effectiveness may lead them to consider new technology as cost-effective alternatives that ameliorate the current labour intensive character of university instruction.

New technology instructional strategies may also appeal to students who desire to pursue a specific topic at any given time and at their own pace. This may be increasingly true as we look at changes in the student population—another significant environmental feature. There is an increase in older part-time students or students offering correspondence courses. These students share the younger group's specificity of reason for enrolling in college courses. They are generally employed (hence, studying part-time classes), and are highly motivated. This is an environmental condition that bodes well for new technology instructional applications. Students may welcome alternatives to traditional instruction, finding them attractive for their savings of time and money and raising efficiency in learning.

Technology so pervades life's routines that students are coming to the college (classroom) with a higher threshold of sensory stimulation. The combination of visual and auditory stimulation inherent in television, the immediate feedback and reinforcement mechanisms of the popular video games, the ability to search newspaper data bases from home computer terminals, the automated bank teller, and so on : today's college student is coming to expect technological sophistication in his or her environment.

This is not to say that college teaching must necessarily and wholly embrace these technologies, but that the lecture may be in danger of becoming an even less effective means of engaging the student's critical attention than it now seems to be. Nor is all this to say that the faculty and their lectures are anachronisms. The hardware and courseware of the new technologies can only complement the teacher. The best kind of education still involves the intuitive value judgment, the leap of imagination, the processing of data by analogy rather than education and human interaction still seems to be the catalyst for these processes.

In Sum

It is a difficult time in which to encourage new university teaching endeavours with untested and albeit promising technology. The traditions of academy have grown up around the simple conventions of solitary scholarship and the lecture and recitation. The prestige and honour have accrued to those who performed these functions well. It is not reasonable or even, perhaps, desirable to attempt radical alteration of the norms. They must, however, be tempered if there is to be accommodation of variation and innovation in post-secondary education.

Institutional incentive system is closely related to academic traditions. If faculty is intended to employ more widely these new technologies, the incentive structure of their workplace must reward and encourage experimentation outside of the norm. Not only faculty workload and incentive considerations must be addressed, but all aspects of the organisation's life (student services, institutional research, recruiting and admissions, etc.) must also reflect commitment to accommodate technological innovation in university teaching.

Students' learning styles and educational goals must be acknowledged and accommodated if the faculty and institution have to retain credibility. Today's college student comes into the classroom with a higher degree of knowledge about technological sophistication than his or her predecessors. This may have far reaching implications for uses of class time other than traditional information dissemination through the lecture.

The most important element, in this crucial moment that ultimately determines the kind and direction of change is the leadership of the organisation. Fostering the kind of institutional climate in which technological innovation takes place requires a committed, effective and academic leadership throughout the organisation. ☐

REFERENCES

Ashby, E. — Adapting Universities to a Technological Society, San Francisco, Jossey-Bass, 1974, p. 33.

Becker, H.J. — Instructional uses of School Computers, Issue No. 1, Baltimore, MD : The Johns Hopkins University Centre for Social Organisation of Schools, 1986.

Entwistle, N. Odor P. & Anderson, C. — Anticipating the Experience of Higher Education through Computer Simulation. *Higher Education*, 16, 1987, pp. 337-355.

Flexner, A. — Universities; American, English & German, Oxford University Press, New York. 1930 (1968).

Sarason, S.B. — The Culture of the School and the Problem of Change, Allyn & Bacon, Boston. 1982.

Toong, H.D. & Gupta, A. — Personal computers. *Scientific American*, 246161, Dec. 1982, p. 92

Tucker, M.S. — Computer in the Schools : What Revolution ? *Jr. of Communication*, 35, 4, 1985, pp. 12-23.

Indian Institute of Management, Bangalore

OFFERS

MANAGEMENT DEVELOPMENT PROGRAMME

ON

MANAGEMENT OF UNIVERSITY SYSTEMS

From January 9-13, 1989.

The Course aims at increasing managerial efficiency of University Systems to enable the Senior Administrators to acquire necessary concepts and skills so as to manage their responsibilities efficiently in the fast changing society.

Last Date for Nominations : December 25, 1988

Faculty Leaders

Dr. Malathi Somaiah
Dr. D. Shanker Narayan

For Details Write to :

Administrative Officer (M)
INDIAN INSTITUTE OF MANAGEMENT
Bangalore 560076

REFERENCE AND RESEARCH TOOLS

BIBLIOGRAPHY OF DOCTORAL DISSERTATIONS

Invauable Reference for Those Seeking to Register for a Doctoral Programme.

The Bibliography is classified by subjects and covers ll the disciplines in which a Doctoral Degree is awarded by the Indian Universities. Each entry gives omplete Bibliographical details, viz. Name of the Reearch Scholar, Title of the Thesis, University/Institute vhere the research was conducted, years of registration nd award of degrees, availability note—where a thesis s available in the University Library/Department concerned/University Office and the Name and complete ddress of the Guide/Supervisor.

Comprehensive and exhaustive as the bibliography is not only reports the research being conducted at the university centres, but also includes research work done at the institutions of national importance, like the IITs, Institutions Deemed to be Universities, like the Indian School of Mines, CSIR Laboratories as also the Research Establishments connected with ICAR and ICMR.

The Bibliography is indeed a measure of the research output of the country.

HARDBOUND

1857-1970	
1. Social Sciences	Rs. 50.00
2. Humanities	Rs. 100.00
3. Physical Sciences	Rs. 125.00
4. Biological Sciences	Rs. 100.00
1970-75	
Physical Sciences	Rs. 120.00
Biological Sciences	Rs. 120.00
Social Sciences and Humanities	Rs. 150.00
1975-76	
Natural and Applied Sciences	Rs. 90.00
Social Sciences & Humanities	Rs. 50.00
1976-77	
Natural & Applied Sciences	Rs. 120.00
Social Sciences & Humanities	Rs. 70.00
1977-78	
Natural & Applied Sciences	Rs. 100.00
Social Sciences & Humanities	Rs. 90.00
1978-79	
Natural & Applied Sciences	Rs. 125.00
Social Sciences & Humanities	Rs. 90.00
1979-80	
Natural & Applied Sciences	Rs. 130.00
Social Sciences & Humanities	Rs. 90.00
1980-81	
Natural & Applied Sciences	Rs. 180.00
Social Sciences & Humanities	Rs. 120.00
1981-82	
Natural & Applied Sciences	Rs. 225.00
Social Sciences & Humanities	Rs. 150.00
1982-83	
Natural & Applied Sciences	Rs. 250.00
Social Sciences & Humanities	Rs. 160.00
1983-84	
Natural & Applied Sciences	Rs. 320.00
Social Sciences & Humanities	Rs. 180.00
1984-85	
Social Sciences & Humanities	Rs. 200.00
Natural & Applied Sciences	Rs. 320.00
1985-86	
Social Sciences & Humanties	In Press
Natural & Applied Sciences	In Press

BOOKS ALSO AVAILABLE WITH LEADING BOOKSELLERS IN THE COUNTRY

Address Enquiries to :

Under Secretary (Publications)
ASSOCIATION OF INDIAN UNIVERSITIES
AIU House, 16 Kotla Marg,
New Delhi - 110002
Phones : 3310059, 3313390, 3312305, 3312429
Telex : 31-66180 AIU IN Gram : ASINDU

DAYALBAGH EDUCATIONAL INSTITUTE

(Deemed University)
DAYALBAGH, AGRA

LIST OF PUBLICATIONS

Books	Price	Language
	Rs.	
1. भारतीय संस्कृति	6/-	हिन्दी
2. विश्व के विविध धर्म	7/-	हिन्दी
LEARNED THESIS		
1. Northrop Frye's Theory of Modes : A Study of His Contribution to Historical Criticism—by Darshan Dayal Dayal, Head of Department of English	80/-	English
2. Studies on the Polarographic Reduction of Some Azo and Vat Dyes by Dr. S. P. Gupta, Head of the Department of Chemistry	125/-	English
3. तुलसी की रस-कल्पना द्वारा डा. एन. एस. दुबे, हिन्दी विभाग	120/-	हिन्दी
4. The Heming Was Hero in Evolution by Dr. Krishna Mitra, Reader, Department of English	120/-	English
5. हिन्दी आलोचना के बदलते प्रतिमान द्वारा डा. बी. पी. शर्मा, हिन्दी विभाग	100/-	हिन्दी
6. India and East Africa Trade by Dr. G.P. Setia, Department of Commerce	175/-	English
7. वर्तमान खड़ी बोली हिन्दी के प्रबन्ध काव्यों में चरित्र-चित्रण (सन् 1950-70 तक) द्वारा डा. श्रीमती प्रेम कली शर्मा, हिन्दी विभाग	120/-	हिन्दी
8. वेदान्त देशिक की साहित्यिक कृतियों की समीक्षा द्वारा डा. श्रीमती सन्त कुमारी श्रीवास्तव, अध्यक्ष, संस्कृत विभाग	120/-	हिन्दी
9. मुग़ल तथा जयपुर शैली में रचित राममाला चित्रावलियों का तुलनात्मक अध्ययन (जयपुर संग्रहालय के विशेष सन्दर्भ में) द्वारा डा. श्रीमती चन्द्रकांता	150/-	हिन्दी
10. म. म. विद्वद्वर श्री गिरिधर शर्माजी, व्यक्तित्व एवं कृतित्व द्वारा डा. (कु.) मीरा शर्मा, संस्कृत विभाग	120/-	हिन्दी
Journals—Annually		
1. DEI Journal of Research in Education and Psychology	20/- 50/-	English (for individual) (for Institution)
2. DEI Journal of English Studies	25/-	English
3. DEI Journal of Science & Engineering Research	40/-	English

CAN BE HAD BY V.P.P. FROM :
DAYALBAGH EDUCATIONAL INSTITUTE
(Deemed University)
DAYALBAGH, AGRA-282005.

The Story of the Banaras Hindu University

Banaras Hindu University which started as a national seat of learning in the country, owes its origin to a number of converging variables that contributed to the cultural resurgence during the late nineteenth and beginning of twentieth centuries. This was a period when many charismatic personalities appeared on the political and social horizon of the country excelling in diversified areas of life and ideas to make India a vibrant and unified force. Pt. Madan Mohan Malaviya belongs to that galaxy of leaders who were dreamers and enquirers and whose perceptions matched their actions. It is a tribute to the genius of Pandit Madan Mohan Malaviya that he envisaged a model university for the country that would combine the best in the Westren scientific thought and the Eastern traditional wisdom, and would be located at a strategic point of Varanasi which had been the cultural capital of the country since the dawn of our history. Apart from this sacred variable, this region was the most backward area and needed a viable educational and manpower base for harnessing the rich potential of the region for developmental purposes.

Since the inception of the University in 1916, it has played a major role in the national building process and contributed immensely by providing educational training and research facilities in various disciplines to the young minds. The students of this University did not live in an ivory tower during the formative stage of its growth but were integrated in the national stream of India's struggle for Independence. It has produced many outstanding freedom fighters and was considered as the second Anand Bhawan by the nationalists during the freedom movement. It was a centre of clash of ideologies and many ideologically poles apart groups were nurtured and nourished in this sacred environment and contributed meaningfully to the process of political development.

The story of its establishment is quite fascinating and romantic, and even incredible. One often wonders as to how the founder of the University was able to raise gigantic material and imaginative manpower resources for the fulfilment of his dream.

The scheme to establish the University was first discussed at a meeting held in 1904 at the 'Mint House' at Banaras under the presidentship of His Highness Maharaja Sir Prabhu Narayan Singh of Banaras. A prospectus of the proposed university was published and circulated in October 1905 and it was discussed at a selected meeting held at Banaras on 31st December, 1905 at which a number of distinguished educationists and representatives of the Hindu community of almost every province of India were present. Top Congress leaders, such as, Gopal Krishna Gokhale and Surendra Nath Banerjee blessed Malaviyaji and asked him to go ahead with the scheme. The scheme was also considered and approved by the Sanatan Dharma Mahasabha which met at Allahabad in January 1906 under the presidentship of Jagadguru Shankaracharya of Govardhan Math. Having secured the approval of educationists, national leaders and religious representatives, Malaviyaji issued the prospectus to the general public on March 12, 1906. The scheme met with approval and received strong support of the press and the public. However, owing to the unfavourable political atmosphere in the country, nothing substantial could be achieved until 1910 when Malaviyaji decided to give up his roaring practice at the Bar in order to devote all his energies to the Hindu University movement. In the meantime, a revised prospectus of the University had been prepared and issued to the public.

Under the aforesaid prospectus, the objects of the proposed university were formulated asunder :

(i) To promote the study of the Hindu Shastras and of Sanskrit literature generally as a means of preserving and popularising for the benefit of the Hindus in particular and of the world at large in general, the best thought and culture of the Hindus, and all that was good and great in the ancient civilization of India;

(ii) to promote to learning and research generally in arts and science in all branches;

(iii) to advance and diffuse such scientific, technical and professional knowledge, combined with the necessary practical training, as is best calculated to help in promoting indigenous industries and in developing the material resources of the country; and

(iv) to promote the building up of character in youth by making religion and ethics an integral part of education.

In order to carry out the above objectives, the university was to comprise the following colleges :

1. A Sanskrit College with a Theological Department;
2. A College of Arts and Literature;
3. A College of Science and Technology;
4. A College of Agriculture;
5. A College of Commerce;
6. A College of Medicine; and
7. A College of Music and the Fine Arts.

An important feature of the proposed university was to be its residential and teaching character with special emphasis on character building and religious instruction. All the then universities of India, viz., those of Calcutta, Bombay, Madras, Lahore and Allahabad, were mainly examining universities. While they had accomplished and were doing very meaningful work, Malaviyaji felt that a mere examining university by its very nature tended to develop the memory out of all proportion to the other faculties of mind and could do little to promote the formation of character He quoted an English writer who had observed, that "although genius always commands admiration, character secures most respect. The former is merely the product of brain power, the latter of heart power ; and in the long run it is the heart that rules in life". Malaviyaji emphasised, "A teaching university would but half perform its function if it does not seek to develop the heart power of its scholars with the same solicitude with which it would develop their brain power. Hence it is that the proposed university has placed the formation of character in youth as one of its principal objects. . . .And what can be more helpful and effective in the training of the character of Hindu youth than the noble teachings of the Hindu religion ?"

The Revised Prospectus of the University made a significant departure from the First Prospectus of 1904 which merits attention here. Under the First Prospectus the medium of instruction in the Hindu University was to be Hindi, in the words of the Mahamana, "India cannot regain her prosperity until the study and application of the modern sciences becomes, so to speak, naturalised in the country. Science cannot become a national possession so long as it has to be studied through the medium of a foreign language. A wide diffusion of science in India. . . . . is not possible until science, both theoretical and practical, can be learnt by Indians in their own country and in their own vernaculars A foreign language. . .cannot serve as vehicle of original thought and medium of instruction for a whole community." Rejecting the suggestion that English should be employed as the medium of instruction atleast in the beginning, Malaviyaji opined, "if lectures are not required to be delivered in the vernacular from the beginning, the preparation of textbooks in Indian vernaculars will be delayed, which will lead practically to a continued use of English as the means of instruction." Prophetic words as these were, unfortunately this decision had to be given up owing, among others, to the opposition of the Government of India, and English was accepted as the medium of instruction in the Revised Prospectus of the university.

The year 1911 was very significant in the history of the Hindu University movement in many ways. Almost simultaneously with the launching of the scheme for the Hindu University, Dr. Annie Besant the founder of the famous Central Hindu College, Banaras was also working for the establishment of "The University of India" at Banaras. She submitted in 1907, a Memorandum for the grant of a Royal Charter for its establishment. Maharaja Rameshwar Singh of Darbhanga was also sponsoring a scheme for the establishment of a Sharda Vidyapeeth (Sanskrit University) at Banaras. Malaviyaji met Dr. Besant and the Maharaja and persuaded them to give up their schemes and work unitedly for the Hindu University. Bringing out this consensus was a great achievement in itself. In October, 1911, together with the Maharaja of Darbhanga, Malaviyaji waited upon the then Viceroy and the Member for Education and secured their support for the proposed University. "The Hindu University Society" was soon formed and got registered in December, 1911 with Maharaja Rameshwar Singh of Darbhanga as its President and Sir Sunder Lal as its Secretary. Thus, the foundations of the University were truly laid and a great educational enterprise was launched in full swing in 1911

The Maharaja of Darbhanga not only donated a a sum of Rupees five lakhs but also led a deputation to different parts of the country to raise funds. Princes and paupers, the rich and the poor, all contributed generously to the funds of the University. Malaviyaji was endowed with a rich melodious voice and remarkable gift of speech whose style, delivery and lucidity had no parallel. He made the fullest use of this in collecting funds for the University. His brilliant speeches produced ennobling influence on the minds of Hindus who contributed with all the might that they had at their command. The promises of donations of nearly rupees thirty lakhs were scured from the public in the course of a few months and, by the beginning of 1915, actual collection exceeded Rs. 50 lakhs, the sum prescribed by the Government of India for introduction of the scheme of the University. Another condition of the Government was also fulfilled on the 27th November, 1914 when the charge of the Central Hindu College was handed over to the Hindu University Society.

The Banaras Hindu University Bill was introduced in the Imperial Legislative Council by Sir Harcourt Butler, the Member for Education, in March 1915 and was passed and received the assent of the Governor General the same year on October 1. During the course of the debate on the Bill, Malavijaji made it clear that the University would be a denominational institution but not a sectarian one. In fact, it has all along been a catholic institution. It offers freeships, scholarships and general scholarships of merit, and is open to persons of all classes, castes and creeds and of both sexes. Hindus, Muslim, Parsi and Buddhist students have been living in the same hostels and even sharing each other's joys and sorrows. The scheduled castes students were exempted from the payment of all tuition fees from the beginning of the University.

Arrangements were soon made for laying the foundation stone of the University in a befitting manner. A site opposite the Ramnagar Palace was selected for that purpose. In a glittering ceremony and amid great rejoicing and festivities, Lord Hardinge, Viceroy and Governor-General of India, laid the foundation stone of the University on 4th February, 1916 in the presence of a distinguished gathering. Speaking of this gathering Lord Hardinge remarked: "It has seldom fallen to my lot to address a more distinguished gathering than which I see before me today, including, as it does, the Governor of Bengal, a constellation of Lieutenant Governors, a veritable galaxy of Ruling Princes and so much of the flower of India's intellect." The foundation laying ceremony was preceded by a fortnight of elaborate Puja and was followed by a four day programme of lectures by Mahatma Gandhi, Dr. Annie Besant, Sir J.C. Bose, Dr. P.C. Roy, Prof. C.V. Raman, etc.

The Banaras Hindu University Act came into force on April 1, 1916. Sir Sunder Lal, an eminent jurist and the Secretary of the Hindu University Society, was appointed the first Vice Chancellor of the University. He was followed by Sir P.S. Sivaswami Aiyer, after whom the Mahamana himself assumed the charge of the Vice Chancellorship in 1919 and continued to guide the destinies of the University in that capacity until 1939. An extensive area of about 1300 acres was acquired for the University. A layout plan was prepared, roads were laid out and the construction of buildings began in 1919.

The Central Hindu College became the first constituent college of the University on October 1, 1917, followed by the College of Oriental Learning and Theology (July 1918), the Teacher's Training College (August, 1918) and the Engineering College (August, 1919). The construction of the buildings of the Arts College, the Physics Laboratory, the Chemical Laboratory, the Power House, several Workshops of the Engineering College, Ruiya, Birla and Broacha hostels and some residential quarters was completed by 1921. These were formally opened by the Prince of Wales in December, 1921.

Courses in Geology, Mining and Metallurgy, and Industrial Chemistry followed in quick succession. The Law College was established in 1923. Ayurvedic College in 1924 and the Women's College in 1928. An Institute of Agricultural Botany was also established. Thus, within a short span of 16 years, the University had established as many as 32 departments of Instruction and training. A separate College of Science was constituted in 1935 comprising the Departments of Physics, Chemistry, Botany, Zoology, Pharmaceutical Chemistry, Industrial Chemistry and Ceramics. A new department of Glass was added to it in 1937 and a separate degree course in Pharmacy was instituted in 1938. By the end of 1939, a separate college of Technology was organised consisting of the departments of Industrial Chemistry, Pharmaceutical Chemistry, Ceramics and Glass Technology. In addition to these institutions, the University provided for extensive playgrounds for various games and sports, and a gymnasium hall, named after Shivaji, was constructed.

Malaviyaji was an ideal Kulapati. To the students, teachers and other employees of the University, he was more of a guardian angel than a mere Vice Chancellor. Nobody returned from his door without receiving some help or encouragement. Although the teachers were paid much less than their market value, a galaxy of eminent scholars were attracted to almost every department of the University under his Vice Chancellorship. Conscientious workers never failed to receive a pat on their back from him. He often paid visits to the various colleges, hostels and laboratories to have first hand knowledge of the difficulties of the students and teachers. His role as the Vice Chancellor of the University for two decades was no less glorious than his role as its founder.

Dr. Sir S. Radhakrishnan succeeded the Mahamana as Vice Chancellor on 24th Sept., 1939 and remained at the helm of affairs of the University for about nine long years. It was during his regime that commerce courses were started in 1940 and the University celebrated its Silver Jubilee in 1942 with Mahatma Gandhi delivering the Silver Jubilee Convocation Address in Hindi. Dr. Sarvapalli Radhakrishnan, speaking at the Silver Jubilee of the Banaras Hindu University said : "Here we did not have a bit of stone, but a whole landcape. If only nature could have life and memory, the stones of Banaras would be able to repeat the words of Ved Vyas and the Rishis of the Upanishads. the sermons of the Buddha, the message of the Gita and the sayings of hundreds of saints and teachers, who have lived in this neighbourhood." Dr. Amar Nath Jha succeeded Dr. Radhakrishnan in 1948 and was himself succeeded the same year by Pt. Govind Malaviya.

The University witnessed another spurt in its developmental activities during the regime of Pt. Govind Malaviya. During a short period of three years, he was instrumental in the establishment of the College of Indology. The College of Music and Fine Arts and the Bharat Kala Bhawan. Four new hostels named after Dr. Radhakrishnan, Dr. Bhagwan Das, Dr. I.N. Gurtu and Dr. Shyama Charan De and a large number of residential quarters were constructed.

The University was able to establish its identity brick by brick on the pattern of basic building blocks and its reputation spread throughout the country and even across the continents. It has been able to attract to its Vice Chancellorship the very best in the field of education in India. After Pt. Govind Malaviya, Acharya Narendra Deva. Sir C.P. Ramaswamy Aiyer, Dr. V.S. Jha, Shri N.H. Bhagwati, Dr. Triguna Sen, Dr. A.C. Joshi, Dr. K.L. Shrimali, Dr. M.L. Dhar, Dr. Hari Narain and Prof. Iqbal Narain successively adorned the office of its Vice Chancellor and helped it continue its progress unabated. The Vice Chancellor, Dr. K.L. Shrimali, was an alumnus of the University with a long and distinguished record of service in the field of education. He had been at the helm of affairs of the University since October, 1969 to January 1977 and his contributions to the development of the University are manifold. During his tenure of office, Dr. Shrimali added ten new hostels including three for women, three hostels for teachers, over a hundred residential quarters of different categories, a Hindi Bhawan, a building each for the Departments of Management Studies and Applied Arts, three cafetarias, a Health Centre, a hospital complex costing over Rs. 1.5 crores, besides extension of many of the existing buildings and renovation of hostels.

The University experienced many ups and down and even witnessed the crisis of its identity due to a number of external and internal pressures and constraints. The crisis in campus environment has to be viewed against the background of a national crisis that has affected the quality of education. The challenge posed dislocated the tranquility of the campus life and the educational planners and practitioners did not know how to restore the credibility of the system. There was a gradual decline of the educational system at all levels The concern and anxiety about it has been brilliantly examined in a preliminary document of the New Education Policy that was released by the Ministry of Education, Govt. of India to seek the participation and involvement of academic community in the process of formulation of new education policy. This document titled 'Challenge of Education—a policy perspective' was debated widely throughout the country and the dialogue on it generated a number of issues and options that facilitated formulation of New Education Policy.

Prof. R.P. Rastogi who joined this University in April 1985 had to grapple with many problems that were inherent in the complex structure of the Banaras Hindu University. A distinguished Scientist of international repute, he succeeded in grasping the nature, scope and dimensions of the problems and accorded priority to the introduction of discipline in the student and the teaching communities. It was exceedingly difficult to bring back the era of discipline in the campus due to the mounting socio-political and other non-academic factors. Being an objective administrator and committed to the concept of excellence, his firm policies in the administration did succeed and the University began to function smoothly. The examination system which was in a critical state and behind its normal schedule for a number of years was brought back to normal position and according to the Calendar of the University. Then came the 125th birth anniversary of Pt. Madan Mohan Malaviya. This provided a new opportunity for self introspection and self analysis and a dialogue with life and works of Malaviyaji for fruition of his ideals and objectives. This effort was widely acclaimed by the academic community and most of the departments and faculty earnestly tried to improve the impoverished campus environment by organising a series of national and international seminars and conferences. The re-emergence of peace and order on the campus provided an impetus to improve the educational climate. One could perceive a sense of involvement and an urge to extend the frontiers of knowledge on the part of the academic community and research students towards various conferences and seminars.

The University has responded to the new concept and the important role of extension education that the government has added to the University system for fulfilling the social obligation. The University is running a programme of Integrated Rural Development and has set up a Centre for Adult and Continuing Education. Its programmes in rural housing, agriculture extension services. social medicine and social surgery, community medicine, legal aid clinics, etc., etc. have won wide acclaim. The good work done by many of the departments of the University has been recognised by the various funding agencies as also the University Grants Commission. This has led to upliftment of the status of many of the departments.

The Associatian of Indian Universities is organising its annual meeting and the conference of the Vice Chancellors on the campus of the Banaras Hindu University. It is hoped that this conference will generate a number of new educational ideas and policy alternatives that would provide a new thrust and a new meaning to the educational system. It is only through a process of dialogue and exchange of ideas that the renewal and updating of ideas is possible in a rapidly changing educational scene converging to explosion in science and technology. □

Pandit Madan Mohan Malaviya
Founder of the Banaras Hindu University

S. Somaskandan

On the 25th December, 1861, when the world was celebrating the birth day of Jesus Christ, in a poor but pious and religious family at Allahabad was born another apostle of peace and goodwill among men, *Pandit Madan Mohan Malaviya*. His ancestors had come from Malva and settled down at Prayag (Allahabad), the Tirtharaj, the confluence of the three sacred rivers. His father, Pandit Braj Nath Vyas was a great devotee of Lord Krishna and was always absorbed in his study and preaching of the gospel of Srimad Bhagavata.

Pandit Madan Mohan Malaviya had his early education in Pandit Hardevji's Dharmopadesh Pathshala and the Vidya Dharma Pravardhini Sabha Pathashala. The seeds of religion were sown in his young mind and before he attained the age of seven, he could preach to big gatherings with wonderful ease and elegance casting a magic spell on his listeners. His Upanayana was performed when he was nine years of age. He was then admitted in the District High School where he studied while continuing his Sanskrit education. He passed the Entrance Examination in 1839 after which he took his admission in the Muir College, Allahabad, where he had the good fortune to come into close contact with Mahamahopadhyaya Pandit Adity Ram Bhattacharya, Professor of Sanskrit in the Muir College. Pandit Aditya Ram Bhattacharya was like an Acharya of the ancient Indian Institutions who was looked upon as a father by the students. Pandit Aditya Ram Bhattacharya had a great hand in moulding the life of Pandit Madan Mohan Malaviya.

In 1880, the efforts of Pandit Aditya Ram Bhattacharya brought about the establishment of the Hindu Samaj at Allahabad, the first political organization in the city and he (Pandit Aditya Ram Bhattacharya) had Pandit Madan Mohan Malaviya admitted to it as a member even though he was still an undergraduate at the Muir Central College. Pandit Malaviya became a leading worker of the Samaj which was primarily concerned with social reform. Thus he started his social work while prosecuting his studies in the College. He graduated from the University of Calcutta in 1884. He then joined the M.A. classes but the poor financial condition of his family compelled him to leave the College soon. He accepted an appointment as a teacher in the Government High School at Allahabad. He also carried on his social activities as a leading worker of the Hindu Samaj. In 1885, when the Indian National Congress came into existence, the Hindu Samaj was reoriented as a provincial organizatiod under the name Madhya Hindu Samaj. It adopted the programme of the Hindu Samaj with emphasis on its social and political work and it became one of the recognised political bodies by whom delegates were elected to attend the annual sessions of the Indian National Congress. Pandit Malaviya was one of the delegates elected by the Samaj to attend the session of the Indian National Congress held at Calcutta in 1886. Pandit Malaviya not only attended this session but also made his maiden speech at the Congress on the fourth day of the session which captured the heart of everyone. Mr. A.O. Hume, the "Father of the Congress", recorded in his report of that session as follows :

"But perhaps the speech that was most enthusiastically received was one made by Pandit Madan Mohan Malaviya, a high caste Brahmin, whose fair complexion, and delicately chiselled features, instinct with intellectuality, at once impressed every eye, and who suddenly jumping up on a chair beside the president, poured forth a manifestly impromptu speech with an energy and eloquence, that carried everything before him".

Sri Surendra Nath Banerjee, the great national leader and orator says :

"......He (Pandit Madan Mohan Malaviya) was so young that he had to be lifted up on a chair in order that the audience might have an opportunity of having a look at him. He had a fascinating appearance but the audience was more charmed by the eloquence of the youthful orator than by his good looks, and that speech, one of the very best that I have heard, made a deep impression upon the minds of the Congress gathering, and pointed him out as one of the future leaders of the Congress movement."

The performance of Pandit Malaviya at the Congress session of 1886 brought him to the forefront of the national leaders. Raja Rampal Singh of Kalakankar who had also joined the Congress was so much charmed with the power of speech and personality of Pandit Malaviya that he pressed him to accept the editorship of the Hindi daily *Hindustan* of which Raja Rampal Singh was the proprietor. Pandit Malaviya conducted the *Hindustan* so ably for a period of nearly three years, that it established his fame as an able journalist.

In 1889, he rejoined the Muir Central College, completed the law course and obtained the LL.B. degree in 1892. He also passed the High Court Vakil examination and entered the bar as a practising lawyer. With his brilliant intellect, rare powers of eloquence and hard work, he quickly rose to eminence in the profession. He was known in the profession as a lawyer of very keen intellect, extremely fair in the presentation of his cases, courteous to his opponents but above everything else he combined scrupulousness to the highest degree with ability of high order. Successive Chief Justices held him in high regard not only for his ability but for his spotless character.

But Pandit Malaviya did not give his whole attention and energy to the legal profession. He carried on his social and political activities simultaneously.

During his tours of the country while attending the Congress Sessions, Pandit Malaviya had the opportunity of observing the conditions in the different spheres existing in the country and he came to the conclusion that in order to revitalise India as a nation, it was necessery to feed her youth with the ancient spiritual and moral food. This led him to organise in November 1900, a meeting of eminent persons at the Muir Central College, Allahabad for establishing a suitable and commodious Boarding House where Hindu students coming from various parts of the country to prosecute their studies at the Colleges at Allahabad could live under proper supervision and guidance, and receive instruction in such fundamental truths of the Hindu religion as are accepted by Hindus of all denominations. Pandit Malaviya succeeded in securing the support of several leading gentlemen in this work besides that of Maharaja Prabhu Narayan Singh of Banaras, and also of the then Lieutenant Governor of the United Provinces, Sir Antony MacDonnell. This resulted in the establishment of "The MacDonnell University Hindu Boarding House" at Allahabad. While performing the opening ceremony of the building, Sir Antony MacDonnell said :

"It was only in such boarding houses that proper religious and moral training could be given. It seems that the Hindus are beginning to feel their duties to their children in this respect. Every Government College in India should have a Hindu Boarding House attached to it, governed by the Hindus."

The burning desire to restore India to its past glory, the urge to combine religion with education for the purpose of developing the national spirit which was the foremost and pressing need of the country, the necessity of reorganising the Hindu Society and the need of placing at the service of the country efficiently trained young men of high moral character filled with patriotism and qualified to promote Indian industries in a variety of ways—all these worked together in the great mind of Pandit Madan Mohan Malaviya and he conceived and put forward in 1904 the idea of a University which would revive the best traditions of the ancient *Gurukulas* of India and which would combine with them the best traditions of the modern universities of the West where highest instruction was being imparted in Arts, Science and Technology. The idea took some time to mature and in December 1910, when Pandit Malaviya was almost in the first rank of practising lawyers, sacrificed the glowing prospects of the profession to the supreme aim of his life—service of his country and the establishment of the Hindu University at Banaras. He saw the fulfilment of his cherished dream in 1916, guided the destinies of the University as its Vice-Chancellor till Sept. 1939 and served it till the last moment of his life.

Though the Banaras Hindu University was the *magnum opus* of Malaviyaji, he did not confine his activities to the University only. He continued to be a beacon light in every activity of the country—political, social, religious, and educational. He was elected President of the Indian National Congress four times (1909, 1918, 1932 and 1933).

Malaviyaji was, in the words of Pandit Jawaharlal Nehru, "a giant among men, one of those who laid the foundation of modern Indian Nationalism and year by year, built up brick by brick and stone by stone, the noble edifice of Indian freedom".

He lived the typical life of a pious and orthodox Hindu, the life of a yogi, who renounced all selfish pursuits and devoted himself solely to the service of his motherland. He was an embodiment of love. His pure and spotless character, his unparalleled self-sacrifice and manifold services will always remain a source of inspiration to the Indian people.

He left his mortal remains on the 12th November 1946, but the great work that he has done and his sacrifice has made him immortal. As Gandhiji said in 1946, "Malaviyaji, the adored of Bharatvarsha is dead, long live Malaviyaji". □

Banaras Hindu University : Important Milestones

1916	Foundation Stone of the University is laid on Vasant Panchami Day.
1917	Central Hindu College, Kamachha declared a constituent College of the University and the University starts functioning on October 1.
1918	College of Oriental Learning and Theology and Teachers Training College are started; the first University examination is held; Building construction commences in May.
1919	Engineering College opens with courses in Mechanical and Electrical Engineering; the first convocation is held in January.
1921	Central Hindu College shifts to new site on the University Campus.
1923	Department of Mining and Metallurgy starts working as part of Engineering College; Law College is established; University Training Corps (UTC), now known as National Cadet Corps (NCC) commences work.
1924	Department of Industrial Chemistry starts with Ceramic Technology Section.
1925	12th Session of Indian Science Congress is held.
1928	Faculty of Ayurveda Medicine and Surgery is constituted in July.
1929	Women's College is opened.
1931	Institute of Agricultural Research is established.
1932	Department of Pharmaceutical Chemistry starts functioning.
1935	Science Departments of Central Hindu College are constituted into a separate College of Science.
1936	Department of Ceramics and Glass Technology is formed; College of Technology comprising Departments of Industrial Chemistry, Pharmaceutical Chemistry, Glass and Ceramics Technology comes into existence.
1941	Opening ceremony of the Sayaji Rao Gaekwad Central Library is performed; 28th Session of Indian Science Congress is held.
1942	Mahatma Gandhi addresses Special Convocation on the occasion of the Silver Jubilee Celebrations of the University.
1944	Department of Geography is established as part of the Faculty of Science.
1945	College of Mining and Metallurgy is established.
1946	Mahamana Malaviya, Founder of the University, passes away on November 12; Construction of the Viswanath Mandir commences; Institute of Agriculture Research acquires the status of a College of Agriculture.
1947	Intermediate classes of Central Hindu College and College of Science are shifted to the old Central Hindu College buildings and thus the Central Hindu College is reborn.
1950	College of Music and Fine Arts is founded; Bharat Kala Bhavan becomes an integral part of the University; College of Indology comes into existence.
1956	Department of Civil Engineering is added to the Engineering College.
1960	College of Medical Sciences is established and M.B ,B S. course starts in September.
1961	Mahamana Malaviyaji centenary is celebrated.
1964	Centre of Advanced Study in Philosophy is established
1965	Central Hindu College, Kamachha is abolished and all University classes return to the campus.
1966	University Celebrates Golden Jubilee; B.H.U. Act is amended resulting in abolition of the College system (excepting Women's College) and the establishment of the Faculty system; Construction of Viswanath Mandir is completed.
1968	Institute of Technology formed by integrating the Engineering College, the College of Mining and Metallurgy; 55th session of Indian Science Congress is held.
1969	Faculties of Theology and Oriental Learning merge into a single Faculty of Oriental Learning and Theology.
1970	College of Medical Sciences becomes Institute of Medical Sciences.
1971	Department of Electronics Engineering comes into being as part of the Institute of Technology; Faculty of Social Sciences comprising the Departments of Economics, History, Political Science, Psychology and Sociology.
1975	Yoga Sadhana Kendra (Centre for Yoga) is established on Vasant Panchami Day.
1976	University Celebrates Diamond Jubilee, Foundation Stone of "Swatantrata Bhavan" is laid.
1977	Schools of Life Sciences, Materials Science and Technology and Languages are constituted.
1978	Computer is ordered and building of the Computer Centre commences; Faculty of Medical Sciences bifurcates into two Faculties under the Institute of Medical Sciences, namely, the Faculty of Medicine and the Faculty of Indian Medicine: Faculty of Music and Fine Arts bifurcates into the Faculty of Performing Arts and the Faculty of Visual Arts.
1980	College of Agricultural Sciences gets elevated to Institute of Agricultural Sciences, Centres of Advanced Study in Metallurgy and Botany get established; Computer Centre is inaugurated.
1981	68th Session of Indian Science Congress is held.
1987	125th Birth Anniversary Celebrations of Mahamana under the joint auspices of Govt. of India and BHU.

BANARAS HINDU UNIVERSITY

A Synoptic View

(Established : 4th Feburary, 1916)

I. STATUS & NUMBERS

1. *Institute* : Technology, Medical Sciences, Agricultural Sciences
2. *Faculties* : 14 3. *Departments* : 112 4. *Schools & Centres* : Centre for Nepal Studies, School of Material Sciences, School of Biomedical Engineering, School of Biochemical Engineering, School of Biotechnology
5. *Advanced Centres* : Botany, Zoology & Met. Engineering
6. *Cosist* : Biochem., Physics, Chemistry, Mining, Chemical, Botany, Zoology, Electrical Engineering, Met. Engineering, Chemistry
7. *U.G.C. Special Assistance* : Physics, Geology, Mining Engineering, Ceramic, Biochem. (IMS), Electronics Engg., Philosophy, Geography and Commerce
8. *Major Research Project* : International : 15 National & other Out-agency Projects : 939
9. *Memorial Lectures* : Malaviyaji, Gandhiji, Dr. Annie Besant, Pandit Jawaharlal Nehru, Dr. B.R. Ambedkar & Extension Lectures.
10. *National Awards Conferred* : (*Present Faculty*)
    (*a*) INSA Fellowships : 16 (*b*) S.S. Bhatnagar Award : 4
    (*c*) ICAR Hari Om Trust Award ... 2
    (*d*) Watumull Foundation (U.S.A.) Honor Summus Medal ... 1
11. *Books Written by Teachers* : About 400
12. *Books Holding* : Sayaji Rao Gaekward Library : over 7 lakhs.

II. COMPOSITION OF COMMUNITY

1. *Students* : 13507 2. *Foreign Students* : 212
3. *Teachers* : 1666 (Exclusive of Temp. & Recent Plan Posts)
4. *Non-Teaching Staff* : 4916 (Exclusive of Research Scholars & other programmes)

III. RESIDENTIAL FACILITIES

1. *Students* : 46 Hostels (7,770 students residing in Hostels)
2. *Quarters for Employees* : Teaching : 597 Non-Teaching : 594

IV. SCHOLARSHIPS

J. R. F. : 941 Out-Agency J. R. F. : 1448
Endowments : J. R. F. : 17 Scholarships : 137

V. STUDENTS' AMENITIES

Hind Flying Club, University Employment & Guidance Bureau, Health Centre, Banking, Swimming Pool, Amphi Theatre, N.C.C., N.S.S., Hobby Centre & Mountaineering, Etc.

VI. CONFERENCE FACILITIES

MMV Auditorium, Music Auditorium, Arts Auditorium, Law School Conference Room, Chemical Engineering Auditorium, SWATANTRATA BHAWAN (Hall of Independence) (2000 Capacity), Electronics Engineering Auditorium, Seminar & Lecture Rooms facilities, L. D. Guest House, University Guest House, Faculty Exchange Building.

VII. SUPPORTING SERVICES

U.W.D., E.W.S., Town Committee, Dairy & Agricultural Farm, B.H.U. Press, Publication Cell, S. S. Hospital (around 1000 beds Allopathic and 150 beds indigenous medicine), Ayurvedic Pharmacy, Instrumentation Centre, Employees' Dispensaries, Public Relations, Cafetaria & Canteens.

VIII. PLACES OF INTEREST

Malaviya Bhawan, Bharat Kala Bhawan, Vishwanath Temple, Swatantrata Bhawan, Sayaji Rao Gaekwad Library and the Campus itself.

IX. IMPORTANT LANDMARKS

1929 : Malaviyaji : Convocation Address on "National System of Education".
1942 : Silver Jubilee : Convocation Address by Mahatma Gandhiji & Quit India Movement.
1946 : Mahamana breathes his last in Malaviya Bhawan.
1961 : Mahamana Madan Mohan Malaviyaji's Centenary Celebrations.
1966 : Golden Jubilee. 1976 : Diamond Jubilee.
1987 : 125th Birth Anniversary Celebrations of Mahamana under the joint auspices of Government of India and B.H.U.

X. FINANCES

Block Grant : Rs. 32.00 Crores University Receipts : 2.55 Crores.

XI. UNIVERSITY MAINTAINED HIGHER SECONDARY SCHOOLS

Central Hindu Boys School, Central Hindu Girls School, Ranvir Sanskrit Vidyalaya, & Kendriya Vidyalaya.

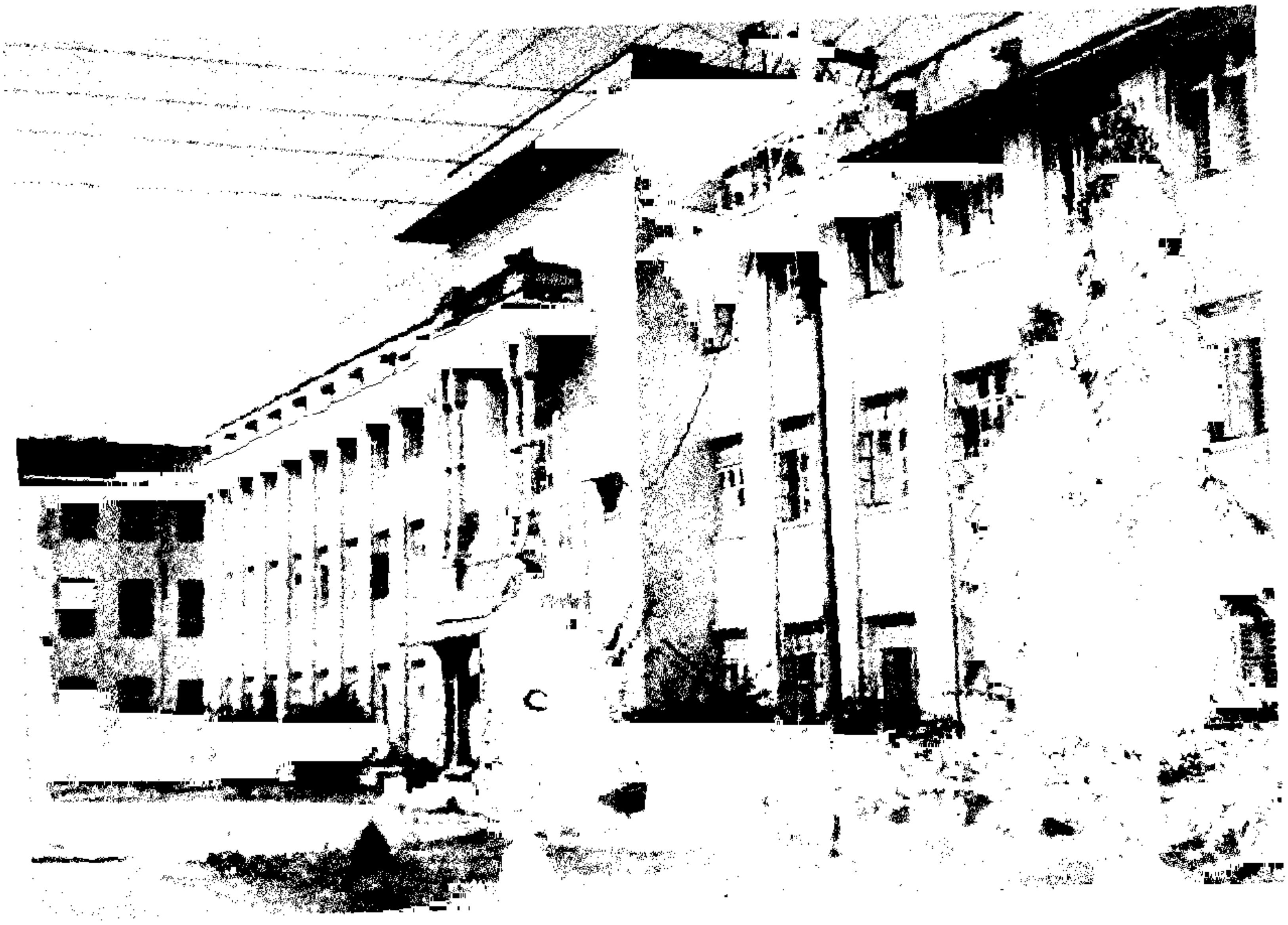
Banaras Hindu University
A Pictorial View

Institute of Technology—Main Building

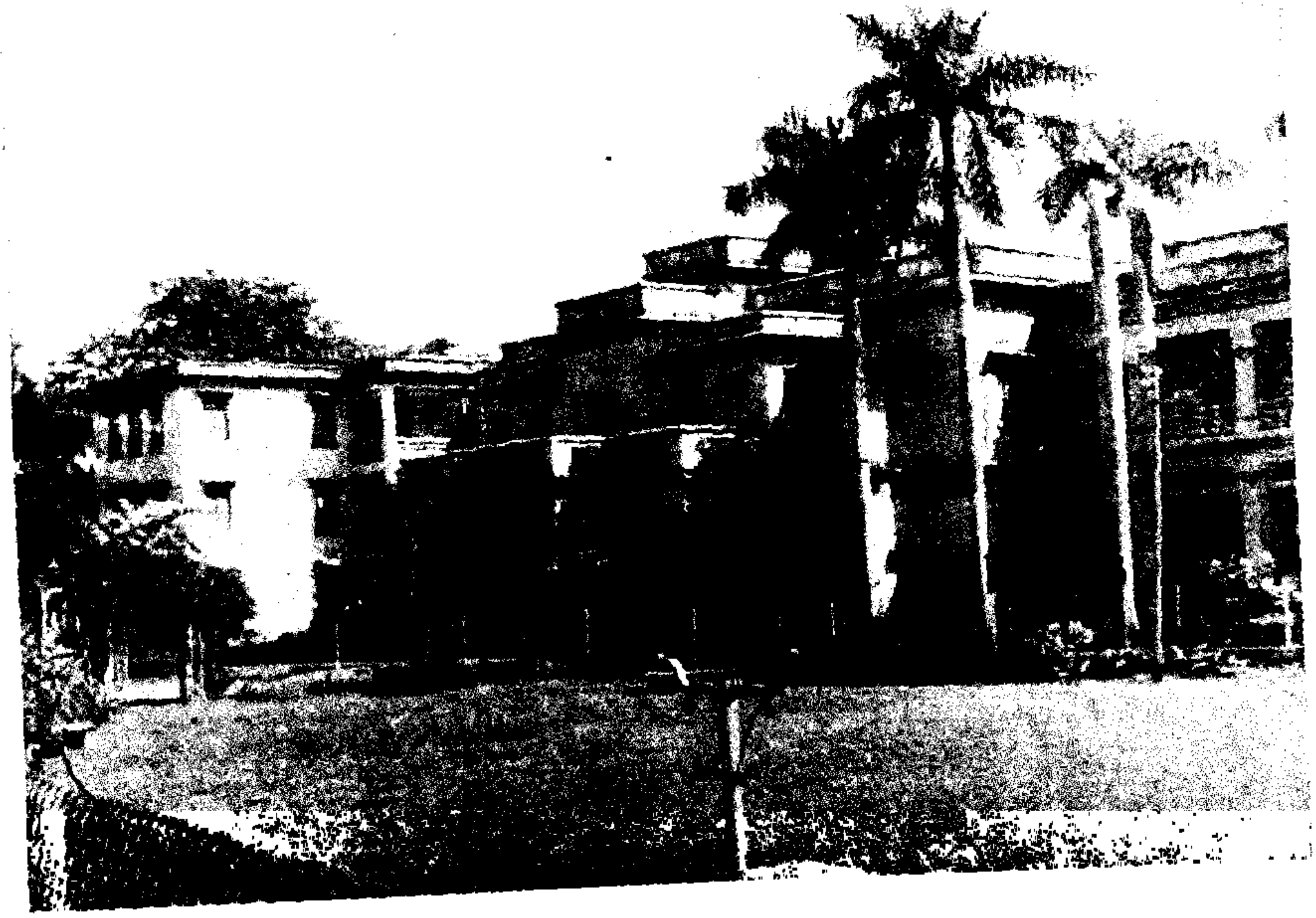
[illegible]

Institute of Medical Sciences—Main Building

Faculty of Ayurveda



Faculty of Social Sciences—Postgraduate Section



Women's College

Malaviya Bhavan

Mahatma Gandhi with Pt. Madan Mohan Malaviya

ASSOCIATION OF INDIAN UNIVERSITIES

63rd Annual Meeting

BANARAS HINDU UNIVERSITY

5-7 December, 1988

PROGRAMME

Monday, 5 December 1988

11.00 A.M.	Opening of Book Exhibition by Shri L.P. Sahi, Minister of State for Education, Government of India	
11.15 A.M.	Group Photograph	
11.30 A.M.	Inaugural Function	
	Welcome Address	— Prof. R.P. Rastogi, Vice-Chancellor, Banaras Hindu University
	Inaugural Address	— Shri L.P. Sahi, Minister of State for Education, Government of India
	Presidential Address	— Prof. P.V. Salvi, Vice-Chancellor, Marathwada Agricultural University and President, Association of Indian Universities
	Vote of Thanks	— Prof. S.K. Agrawala Secretary, Association of Indian Universities
3.00 P.M.	**Committee Meetings**	

Tuesday, 6 December 1988

9.00 A.M.	General Session
3.00 P.M.	Business Session (For Members only)
6.30 P.M.	Cultural Programme

Wednesday, 7 December 1988

9.30 A.M.	Special Discussion on Making the University System Work
4.00 P.M.	Concluding Remarks

BHU Hosts 63rd Annual Meeting of the Association of Indian Universities

The Association of Indian Universities meets in its 63rd Annual Session at the sprawling Banaras Hindu University Campus on 5th to 7th December, 1988. To be presided over by Prof. P.V. Salvi, Vice Chancellor, Marathwada Agricultural University and President, Association of Indian Universities, the meeting will be inaugurated by Shri L.P. Sahi, Minister of State for Education, Government of India.

A number of vital academic issues will come up for consideration of the General Body. Sri Krishnadevaraya University has proposed rural reconstruction through meaningful extension programmes. As the universities work for only over 100 days in an academic year, leisure time of both the faculty and students can be well utilised by rendering service to the rural community. The problems of rural health and sanitation, nutrition, modernisation of agriculture, motivation of rural people to take up meaningful employment etc., can be effectively tackled by student volunteers under the guidance of committed faculty members. It is suggested that extension be made a compulsory component of curriculum and faculty members and students given proper orientation before being drafted in the programme. Gandhigram Rural Institute has suggested that the university should act as a brain bank for the State and the Community, and play a greater role in solving the problems of the community where they are situated and their command area. It seeks to assign the role of a nodal agency to the proposed State Councils of Higher Education which should receive such problems and farm them out to the specific university departments for seeking innovative solutions. The problems could be referred to the Council by the State Government as also other institutions. The Institute believes that in this way the knowledge gained and developed at the university will have a interface with real situations and help add luster and life to higher education. The role of universities in the National Literacy Mission will also come up for discussion at the meeting.

The proposal from Vikram University seeks redesigning of course modules of the National Education Test for Junior Research Fellowships offered by the UGC and CSIR. It calls upon the UGC and CSIR to allocate funds to universities to conduct coaching classes for the intending students for National Education Test to give them proper guidance and coaching in developing cognitive activities like comprehension, analysis, evaluation, understanding, deductive and inductive reasoning, etc.

Birla Institute of Technology, Mesra has proposed that a recommendation from the Association be made for 100% income tax exemption to donations for endowment purposes as against the present 50%, subject, however, to the overall 10% of the donor's total income.

The proposal from Goa University calls for setting up of community colleges for the development of middle level professional manpower. Apart from reducing the number of youth adding to the ranks of the unemployed, the community college will give a vocational direction to the education system and also meet the craze for university degrees. It is suggested that atleast one community college in each state is established during the Eighth Five Year Plan as an experimental measure. Vikram University has proposed the establishment of a training institute for imparting training to entrants to the service cadre of middle and higher level educational administrators.

A proposal from Tripura University seeks waiving the clause pertaining to minimum teaching experience for appointment to the posts of Readers and Professors in the universities in respect of research scholars working in research institutes. It is claimed that this will not only ensure mobility of scholars to and from universities and research institutions, but will also help avoid wastage when many a research scholar leave a project in the research institutes half way to join as a lecturer in a university or a college. By another proposal, Tripura University has suggested that the clause that the Ph. D. scholars must work within the territorial jurisdiction of the university be dispensed with to enable the research scholars to work in specialised institutes under the guidance of recognised experts who may be stationed not within territorial jurisdiction of the university.

A proposal from Haryana Agricultural University (HAU) seeks a study of the existing rules and procedures for the appointment of Vice Chancellors for formulation of unbiased and uniform procedure. HAU will also like the General Body of the Vice Chancellors to discuss the issue of periodic assessment, monitoring, accountability and evaluation of teachers. Apart from the internal system to assess the accountability and evaluation by university authorities, it is proposed that the services of reputed academicians and other educational institutions should also be utilised. Similarly the proposal from Alagappa University would like the General Body to discuss the issue of identifying thrust areas in research. It hopes evolving a mechanism and identifying thrust areas will broaden the scope and utility of socially relevant research. Other issues likely to come up pertain to institution of fellowships by universities, housing *facilities for faculty, students and* non-teaching employees, examination reforms, establishment of regional centres of UGC and setting up of co-operative bookshops on the university campuses.

The General Body will also have for its consideration the reports of its visiting committees for regular membership of Kashi Vidyapith and Gulbarga University. It will also consider the applications for admission from Indira Gandhi Krishi Vishwavidyalaya, University of Agricultural Sciences, Dharwad, Avinashilingam Institute of Home Science and Education for Women, North Gujarat University and Tripura University. Another important *item to come up for discussion will* be the removal of Vice Chancellors of Bihar and Madhya Pradesh universities.

A special discussion on 'Making the University System Work' will be organised on 7 December. Two theme papers, one by Prof. Rais Ahmed, Former Vice-Chairman, University Grants Commission and the other by Shri Anand Sarup, Chairman, National Book Trust will be presented. Panelists for the discussion include Shri Anil Bordia, Education Secretary, Ministry of Human Resource Development, Govt. of India; Prof. P. N. Srivastava, Member, Planning Commission; Prof. G. Ram Reddy, *Vice Chancellor, Indira Gandhi* National Open University; Prof. V.C. Kulandaiswamy, Vice Chancellor, Anna University; Prof. Moonis Raza, Vice Chancellor, University of Delhi; Prof. A Gnanam, Vice Chancellor, Madras University; and Prof. R.P. Rastogi, Vice Chancellor, Banaras Hindu University. ☐

....in search of better books

Prentice-Hall of India aims at providing university students with inexpensive text and reference books of standard and quality. Under the imprint of Eastern Economy Editions, more than 500 titles are now available comprising mostly of reprints of outstanding American textbooks as well as original contributions of eminent Indian academics.

Prentice-Hall of India constantly endeavours to maintain the excellence and the recognition accorded to it by the prestigious institutions of learning.

The list of publications includes titles on variegated subjects and disciplines like Business Management, Computer Science, Engineering and Technology, Physical and Life Sciences and Hamanities.

For a complete catalogue please write to :

Prentice-Hall of India Private Limited
M-97, Connaught Circus, New Delhi-110 001.

United Nations Week at Osmania

The Osmania University Library in collaboration with the ICSSR Southern Regional Centre organised a week long programme to celebrate the United Nations Day by organising Book Exhibition, a film show, a symposium, an Elocution Competition and Orientation for the students and researchers to the United Nations Depository collection.

The U.N. Week and Book Exhibition was inaugurated by Dr. S.K. Verma, Director, Central Institute of English and Foreign Languages. Prof. K. Madhusudhan Reddy, Principal, University College of Arts & Social Sciences, Osmania University delivered the keynote address while Prof. E.G. Parameshwaran, Director, ICSSR-SRC, presided.

Mr. N.B. Inamdar, University Librarian, explained the objectives of organizing the programme and invited the student community and researchers to avail of this opportunity to know about the U.N. and its various agencies and their contribution to the world peace and social and economic development of the people of the world by listening to experts and referring the documents displayed and available in Depository collection.

Prof. S.K. Verma in his inaugural address traced the developments that led to establishment of this world organisation. He said that various agencies, particularly the ones devoted to Economic, Social and Cultural programmes were trying to build firm bases of peace in this maddening world of cut-throat competition and hunger for power. He appreciated the commendable work being done by U.N. and its agencies for removing illiteracy and ignorance and creating a spirit in the minds of men for peace, justice, and freedom. Prof. Verma said that U.N. deserved the support of the entire world so that it could achieve its objectives.

Prof. K. Madhusudhan Reddy, who delivered the keynote address, pointed out the dichotomy of values that were implicit in this organisation and aspirations of the people of the 3rd world countries. Prof. Reddy was of the opinion that world powers were not allowing the United Nations to play its role effectively. Maybe limited wars but they were fought in more numbers after the United Nations came into existence. He deplored that in spite of this world forum the areas of tension have shifted to the 3rd world countries and acting as big hindrance in their efforts of social, economic and cultural uplift of vast masses. He, however, held that in spite of all these shortcomings there was no alternative to this Body and therefore, it need be supported, particularly by the people in 3rd world countries.

In his presidential remarks Prof. E.G. Parameshwaran dwelt upon the contribution of Unesco, FAO, UNICEF and other agencies and said one had to give proper weightage to their activities and particularly mentioned about Adult Education and Child Health Programmes. Certainly, the atmosphere created by the United Nations and its various agencies was conducive for a better world, he concluded.

To mark the occasion, a Symposium of Unesco's contribution to Social and Cultural Development of the world was also organised at which Prof. J.V. Raghavendra Rao of Dept. of Sociology and Prof. Rama S. Melkote of Dept. of Political Science were the main speakers.

Prof. Raghavendra Rao, said that Unesco was taking care of psychological factors through its welfare activities like education, cultural development, scientific and technological aspects, and communication, and striving to develop the human resources. He emphasised the point that such efforts could lay the foundation for better understanding and appreciation among the people of the world. He dwelt at length about the projects to illiteracy, child welfare, removing of hunger and diseases that are being supported by Unesco. He particularly mentioned about scientific and technological activities in the third world countries which would help the younger generation to enter the 21st century with greater confidence and competence.

Prof. Rama S. Melkote, was of the opinion that ideas and ideals pursued by Unesco were of great value. She cited various resolutions passed by Unesco in 1972 in furtherance of peace and understanding, removal of racial discrimination, respect for human rights, etc.

Prof. Radhakrishna Sharma, the Director of the Symposium, said that Unesco had propounded that cultural heritage of any country was not its preserve, but it was a preserve of the entire world. He felt that the role of Unesco in propagation of ideas relating to education and culture were bound to contribute to creating a better environment that will lead to the lasting peace on earth.

The Osmania University Library is a Depository of the United Nations Documents and a member of Unesco Club. It receives documents from the United Nations and its various agencies as a part of this depository arrangements. There are at present seven thousand United Nations Documents including, verbatim debates of the Security Council and General Assembly and other important reports from the various agencies of United Nations. By celebrating this week long programme, the Library brings to the notice of Post-graduate students, researchers and faculty members the invaluable collection available in the U.N. Section of Osmania University Library for study and research.

World Congress on Universities in Development

The Fourth World Congress of the Departments of French Studies is being held in New Delhi between 14-20 December, 1988 to discuss the role of Universities in development in the specific context where French language is the instrument of communication. Hosted by the Jawaharlal Nehru University, the Congress is being organized under the aegis of the Canada based Association of Universities where French is taught or is a medium of instruction (AUPELF). The New Delhi Congress would highlight the role the teaching and learning of French can play in creating awareness of the issues of progress and change and in contributing to their problem solving in a comparative framework. Over 250 delegates from about 180 universities from India and abroad are expected to participate in the Congress which is being held for the first time anywhere in Asia.

AUPELF, which is a non-Governmental International Association came into being in 1961. It is a multi-disciplinary international forum with a world-wide membership of 180 Universities and 400 Departments of French Studies. It seeks to offer a permanent platform for University Institutions to evaluate and assess the role of universities in national and international life and their role in promoting socio-cultural development of their respective societies.

AUPELF is an associate member of the International Association of Universities and has consultative status with UNESCO.

Chair in Applied Economics

The University Grants Commission (UGC) has instituted a chair in applied economics which will be available to an outstanding scholar from SAARC countries with established reputation and significant contribution in his field of specialisation.

The chair will be located either at the Delhi School of Economics, Delhi University or at the Gokhale Institute of Politics and Economics, Pune (Maharashtra).

The tenure of this Chair would be of two years extendable by one more year. Besides the Chair, the UGC has also approved the institution of six SAARC fellowships and 12 scholarships to be made available at different universities and institutions.

The six fellowships, each of one year duration, would be awarded to experienced scholars with published works of high quality from SAARC countries. These will be in the fields of education, environment, agriculture, mass communication, language and literature, transport engineering and applied economics.

The 12 scholarships have been slotted for master's programme in business administration, bio-chemistry, social work, food technology and home science for women.

The University Grants Commission would be the local agency for scrutinising the applications for all the 19 scholastic positions received from the member countries through SAARC secretariat.

Similarly, nominations of Indian nationals will also be made by the UGC through the Government of India for SAARC countries.

Prof. Pitke named for the World Body

Prof. M.V. Pitke of the Tata Institute of Fundamental Research (TIFR) and Director, Centre for the Development of Telematics, has been appointed by Prof. Abdus Salam Nobel Laureate, to be a member of the steering committee of the International Centre for High Technology and New Materials.

This appointment is in recognition of the pioneering efforts undertaken by Prof. Pitke to propagate indigenous and self-reliant development of electronics, computer and information technology in the third world countries.

A group of scientists, headed by Prof. Pitke, has already been working on the project at the International Centre for Theoretical Physics.

Funded by the Italian Government the International Centre for High Technology and New Materials, headed by Prof. Abdus Salam, will strive to help the developing countries in the indigenisation and development of high technology and new materials through dissemination of the state of the art technology in the areas of computers, electronics and information. The centre has a unique objective of bridging the technology gap between the developing countries and the developed countries, especially in the frontier areas of computers and informatics.

The appointment of an Indian scientist to the steering committee of an international centre is also a recognition of the leadership provided by India in the field of high tech indigenisation.

UGC Grant for Gandhi Varsity

Mahatma Gandhi University, which was recognised by the University Grants Commission (UGC) only recently has been sanctioned Rs. 75 lakh as the first grant by the UGC. The grant has to be utilised during the remaining one-

and-a-half years of the Seventh Plan. Rs. 20 lakh has been sanctioned for the university library and Rs. 28 lakh each for hostels for women and men.

The State Government was expected to bear 25 per cent of the cost of the women's hostel and 50 per cent of the cost of the men's hostel.

Research Facilities in Materials Science

Thapar Corporate Research and Development Centre (TCRDC), an integral part of the Thapar Institute of Engineering and Technology, Patiala (TIET), has selected Materials Science as one of its major research areas. At present the Materials Science Division is very well equipped for carrying out the processing, characterization and evaluation of different materials. The existing facilities include Scanning Electron Microscope, Hydraulic Press, X-Ray Diffractometer, Image Analyser, Vacuum and other atmosphere furnaces, Powder making equipments, Metallographic and powder characterization instruments.

The research is carried out in the fields of Powder Metallurgy, Alloy Design and Development, Composite Materials and Ceramics. In addition to the projects in these thrust areas, the Division is providing services to various industries for Materials Analysis and Failure Analysis of structural components.

At present work is in progress under three projects: Development of Electrical Contact Materials; Development of Rare Earth Permanent Magnets; and Computerized Alloy Design and Development.

New Dept. of Science Set Up

The Government of West Bengal is reported to have created a new Department of Science and Technology.

A council was set up with the Chief Minister as the Chairman, at the inaugural meeting of the Department held recently. Dr. D.K. Bose, Vice-Chairman of the state planning board, was appointed the Vice-Chairman of the council. Distinguished scientists Dr. Sushil Mukherjee, Dr. Ramen Poddar, and Dr. B.D. Nag Choudhuri were present.

According to sources, it was decided that the council would encourage and monitor research in the field of energy, bio-technology and plant chemistry.

Lasers for Physicists & Chemists

A 7-day Workshop on Lasers for Physicists and Chemists was recently organised at the Department of Physics, Dr. Harisingh Gour University. The first of its kind to be held in the State, the Workshop was sponsored by MAPCOST, DST, INSA and BARC.

Prof. T.S. Murty, former Director General of the M.P. Council for Science & Technology who inaugurated the Workshop stressed that there should be proper and effective relationship between scientists and planners at the state level. He called upon the funding agencies to finance the Universities in a big way. He advised the researchers to move out of their laboratories and develop contacts with people and their leaders. Prof. Murty lauded the contribution of Pandit Nehru in the area of science and technology and said that there can be no technology without basic scientific research.

Mr. M.L. Jain, the Vice-Chancellor of the University, highlighted the benefits of the laser technology.

Fourteen leading laser specialists and 30 participants attended the workshop.

Commonwealth of Learning

Prof. G. Ram Reddy, the Vice-Chancellor, Indira Gandhi National Open University, is reported to have been appointed on the board of governors of the Commonwealth of Learning.

Headed by Lord Briggs, distinguished historian and authority on broadcasting and communication, the 'Commonwealth of Learning' has been created to widen access to opportunities for learning throughout the Commonwealth.

Academy of Adventure

The State Government of Gujarat is reported to have decided to set up an Academy of Adventure to encourage cultural and adventurous activities.

The academy will set up the necessary infrastructure to train youth in mountaineering, trecking, boating and sea-faring activities.

News from Agril. Varsities

BAU Emphasises Dryland Farming

Birsa Agriculture University (BAU) has laid special emphasis on oilseeds and pulses in its consistent endeavour to perfect technological innovations which could take out the farmers from the present morass and lift the subsistence farming to the stage of productive farming.

Within the overall framework of resource optimisation the dry land technology has basically aimed at maximising Kharif production and growing remunerative rabi crop thereby increasing the cropping intensity and better land utilisation. Various facets of crop production have been integrated into a viable, stable and remunerative, technology. Cropping system have been evolved for different land situations, such as inter-cropping for uplands and sequence as well as relay cropping for medium lands.

For uplands, emphasis has been placed on crop diversification through drought resistent crops like Sorghum and Madua (Ragi) Soybean and Groundnut and other productive crops like maize.

Due attention has been given to tailor crop varieties of proper maturity having drought resistant capacity and good yielding ability to suit various situations. Of the outstanding varieties mention may be made of Brown Gora 23-19 *Birsa Madua-1 Sunaina* in green gram Birsa Aulthi-1 in horse gram. Swarnarekha in peas. Birsa groundnut-1, 2 and 3, Priya in French been, etc. For dryland technology to succeed it has to be viewed as a system rather than a conglomeration of individual crops.

National Seminar on Forestry Education

Wideranging changes in the forestry education and training system to meet research and management needs, have been suggested by forestry experts and educationists at a national seminar on "Forestry education and trainings in India," at the Forests Research Institute. Dr. R.M. Singhal, Secretary, Society of Indian Foresters, said the introduction of forestry as a subject in school has been suggested as also post-graduate and doctoral courses. The curriculum at the higher level should include courses in mass education.

A two-way movement of scientists from universities into research establishments of Forests Departments and forests officers into universities has been suggested.

Terming the present two-year training for Indian Forest Services probationers as inadequate, the experts at the seminar have suggested additional eight months of job orientation. Probationers should also be attached to national institutes of the region so that they come to understand the local problems.

Every five years, a short course at the Indian Institute of Forestry Management, Bhopal, was also recommended.

INSAT-1B Programme of UGC

Between 21st December to 31st Dec., 1988 the following schedule of telecast on higher education through INSAT-1B under the auspices of the University Grants Commission will be observed. The *programme is of one hour duration* every day from 12.45 p.m. to 1.45 p.m. (Repeated from 4 p.m. to 5 p.m.) and will be available on the TV Network throughout the country. For the viewers in Delhi and surrounding areas these programmes can be seen on the second channel.

21.12.88

"Mechanics of Metal Cutting"
"Flint Implements"
"Cytoskeleton"

22.12.88

"Sequential Circuits"
"Understanding Poetry—III"
"Srinivasa Ramanujan"

23.12.88

"Philosophy of Science—Of More and Less—I : A Tour in Philosophy of Science"
"Ethnographic Film—Different Perspectives"
"Erosion Central"

24.12.88

"Literature & Music—II"
"Heiner Scheppers—A Puppetear"

25.12.88

No Telecast

26.12.88

"The Unstable Nucleus"
"Linear Programming"
"Water Spider"

27.12.88

"The Ceramic Art in Japan"
"Domains of Learning"
"Pancha Karma—II : Pradhan Karma"

28.12.88

"Science and Technology & the Universities—An Interview with Dr. V.S. Arunachalam"
"Cartography : Interpreting Maps—I"
"Condemned to Progress"

29.12.88

"Logic Circuits"
"Fossils : Stories in Stone"
"How to Read a Contemporary Poem I"

30.12.88

"Philosophy of Science—Of More and Less-II From Quality to Quantity"
"Ethnographic Film—I Monologue"
"Dearer than Diamonds"

31.12.88

"Literature & Music III"
"Home Science goes to the Village"

News from Abroad

High-Tech Network for Australian Universities

Australia's higher education institutions will be linked by a sophisticated computer network under a proposal agreed to by university and college bodies. The joint plan will see the development of a National Academic Computer Network linking the nation's 21 universities and 43 institutions of higher education. Academics and administrators will be able to communicate directly with each other and colleagues in New Zealand and other countries, exchanging letters, research data, reports and statistics.

The decision to proceed with development of the network follows months of work by a joint steering committee of the Australian Vice-Chancellors' Committee and the Australian Committee of Directors and Principals. The Chairman of the Committee, Professor Ken McKinnon, Vice-Chancellor of The University of Wollongong, said that the network was an essential development for higher education. This network will give academics the chance to co-operate more easily in their research," he said. "They will be able to 'talk' to each other across the country, discussing their work without moving from their desks."

Professor McKinnon said the network would eventually give staff access to specialised facilities such as supercomputers, design software, databases and the preparation of graphics. The network will have a dedicated overseas link so that staff can link to international computing facilities—particularly important for academics who are part of an international community with specialist interests.

विद्यार्थियों / अध्यापकों के लिये शुभ संदेश

पठन-पाठन प्रक्रिया में सुविधा के लिये भारतीय विश्वविद्यालय संघ कई वर्षों से स्नातक व स्नातकोत्तर स्तर के विभिन्न विषयों पर अंग्रेजी भाषा में प्रश्न-बैंक प्रकाशित करता रहा है। इन प्रकाशनों में उपलब्ध सामग्री एवं सूचना शिक्षकों एवं विद्यार्थियों के लिये अत्यन्त उपयोगी सिद्ध हुई है।

हिन्दी भाषी प्रांतों के शिक्षकों एवं विद्यार्थियों की लम्बे समय से चली आती मांग को पूरा करने के लिये प्रश्न-बैंकों की इस श्रृंखला को हिन्दी भाषा में प्रकाशित करने का हमारा यह पहला प्रयास निश्चय ही लाभप्रद सिद्ध होगा। इसी आशा के साथ प्रस्तुत है :

जन्तु विज्ञान (Zoology)	मूल्य रु० 100.00
रसायन विज्ञान (Chemistry)	,, रु० 160.00
वनस्पति विज्ञान (Botany)	(प्रकाशन में)

अधिक जानकारी के लिये लिखें अथवा सम्पर्क करें —

अवर सचिव (प्रकाशन)
भारतीय विश्वविद्यालय संघ
ए.आई.यू. हाउस, १६ कोटला मार्ग
नई दिल्ली-११०००२

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month', while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand

Research Scholars and students of education are welcome to use these resources. The Library is open from 9.00 a.m. to 5.30 p.m. Monday through Friday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A List of Research Scholars Registered for Doctoral Degrees of Indian Universities

SOCIAL SCIENCES

Psychology

1. Singh, Shobha. *A study of personnel and organizational determinants of coping strategies.* BHU. Dr. A.K. Srivastava, Department of Psychology, Banaras Hindu University, Varanasi.

Social Work

1. Kaxi, B.T. *A Study of the Muslim Satyashodhak Mandal as a social reform movement in Maharashtra.* Shivaji. Dr. A.D. Madgulakar, Chh. Shahu Central Institute of Business Education and Research, Kolhapur.

Political Science

1. Negi, Sudesh. *Political and social approach to adult education : A case study of H P.* H.P. Dr J. Alam, Assoc. Prof., Department of Political Science, Himachal Pradesh, University, Shimla.

Economics

1. Lalan, Brikhesh Chandra Lal. *The role of foreign aid in the economic development of Nepal.* BHU. Dr. G.D. Mishra, Department of Economics, Banaras Hindu University, Varanasi.

Education

1. Radhakrishnan Nair, N.R. *Historical development of sports in Kerala during post independence period, 1947-1957.* Kerala. Dr. Jayant Mukerji, Lakshmibai National College of Physical Education, Trivandrum.

Home Science

Agarwal, Anjana. *Effect of essential oils as protectant against pulse beetle cellasobruchus chinesis Linn, infecting pulses during storage and their impact on nutritive value and acceptability of these species.* Delhi. Dr. K.K. Kapur, Head, Department of Community Resource Management, Lady Irwin College, New Delhi.

HUMANITIES

Philosophy

1. Anuradha. *The problem of religious knowledge.* Panjab. Prof. Dharmendra Goel, Department of Philosophy, Panjab University, Chandigarh.

2. Francis Nur Mahi. *A critical analysis of the concept of ultimate reality in the old and new testament.* Devi Ahilya. Dr. R.S. Sharma, Prof. and Head, Department of Philosophy, Indore Christian College, Indore.

3. Sherly, N.R. *Ordinary language philosophy : A study.* Kerala. Dr. D. Nesy, Lecturer, Department of Philosophy, Govt. Women's College, Trivandrum.

4. Simon, Satish Smart. *Kaling Tood ke darshan ka alochanatmak adhyayan.* Devi Ahilya. Dr. R.N. Vyas, 17/2 Raj Mohalla North Indore.

Language & Literature

English

1. Bhalla, Anupam. *Familial conflict in the selected plays of Arthur Miller*. HP. Dr. B.S. Pathania, Department of English, Himachal Pradesh University, Shimla.

2. Chandel, Narvir Singh. *J.D. Salinger and Churning of faiths : Zen Vedanta, Christianity Tantra : A study of the spiritual and secular crisis of the Salinger Here*. HP. Dr. Priya Vrat Bisht, Department of English, Govt. College Mandi.

3. Jacob, P.J. *Myth and ritual in the novels of Raja Rao and R.K. Narayan*. Kerala. Dr. N. Viswanathan, Prof., Institute of English, University of Kerala, Trivandrum.

4. Nair Rohini *Desire in Southern experiene as reflected in the short stories of Endora Welty, Carson McCullers and Flanney D' Connor*. Kerala Dr. K. Radha, Reader, Institute of English, Univrsity of Kerala, Trivandrum.

5. Prabhakar. Paresh K. *Jerome David Salinger's Glass Family : An interpretation*. HP. Dr. Som P. Sharma, Department of English, Himachal Pradesh University, Shimla.

6. Puri, Satya Pal. *Mythical and fabulistic mode in the novels of William Golding : A select study*. HP. Dr. Shyam M. Ansari, Department of English, Himachal Pradesh University, Shimla.

7. Santosh, B. *The aesthetics of Indian paralled cinema 1970-88*. Kerala. Dr. V. Rajakrishnan, Reader, Department of English, University of Kerala, Trivandrum

8. Sharma, Inder Dev. *Sri Aurobindo's Savitri : A study in perspective; a jungian interpretation*. HP. Dr. Priya Vrat Bisht, Department of English, Govt. College, Mandi.

9. Unnithan, M. Gopalakrishnan. *The use of English in Trivandrum City : A socio linguistic study*. Kerala. Dr. V. Syamala, Prof., Department of English, All Saints College, Trivandrum.

10. Varma, B. Kerala. *The self in Roethke's poetry*. Kerala. Dr. A. Jameela Beegum, Lecturer, Institute of English, University of Kerala, Trivandrum.

11. Yadav, Manasvi. *Depiction of Sikh culture in Indo-English fiction*. Panjab. Prof. Darshan Singh, Department of Guru Nanak Sikh Studies, Panjab University, Chandigarh and Dr. R.K. Srivastava, Prof., Department of English, Guru-Nanak Dev University, Amritsar.

Sanskrit

1. Charuvila, Manimohanan M. *The spotavada of Bhartrhari and the logos theory of Plato : A comparative study*. Kerala. Dr. Jacob Kattackal, Centre for Vedanta Studies, University of Kerala, Kariavattom.

2. Garde, Radha. *Ras Chandrika ka kavya shastriya adhyayan*. HS Gour. Dr. Radha Ballabh Tripathi, Prof. and Head, Department of Sanskrit, Dr. Hari Singh Gour Vishwavidyalaya, Sagar.

3. Jain, Ravinder Kumar. *Amitgatikrit Yogsaar prabhrit ka sameekshatmak adhyayan*. BHU. Dr. Kamlesh Kumar Jain, Lecturer, Department of Jain Baudh Darshan, Banaras Hindu University, Varanasi.

4. Khiste, Vinod Kumar. *Mahamahopadhyay Narayan Shastri Khiste Mahabhaganom : Vyaktitva Krititvanch*. BHU. Dr. Shiv Dutt Sharma Chaturvedi, Department of Sahitya, Banaras Hindu University, Varanasi.

5. Pandey, Chander Bhushan. *Malviya Mahakavyasya samalochanam*. BHU. Dr. Chander Mouli Dwivedi, Department of Sahitya, Banaras Hindu University, Varanasi.

6. Pandey, Rajender. *Jarasandhvadh Mahakavyasya samalochanahnakam adhyayanam*. BHU. Dr. Chander Mouli Dwivedi, Department of Sahitya, Banaras Hindu University, Varanasi.

7. Shukla, Rajender Prasad. *Shuklayajarvediya parishishtanam parisheelanam*. BHU. Dr. Kailash Chander Sharma Dave, Department of Veda, Banaras Hindu University, Varanasi.

8. Tiwari, Ram Bharat. *Radha Charit mahakavyasya sameekshatmakamadhyayanam*. BHU. Dr. Shiv Dutt Sharma Chaturvedi, Department of Sahitya, Banaras Hindu University, Varanasi.

9. Tiwari, Ramanand. *Eksheshadhikar vimarshah*. BHU. Dr. Ramesh Chander Panda, Department of Vyakaran, Banaras Hindu University, Varanasi.

10. Trivedi, Krishan Mohan. *Vidhivindanamah : Sameekshatmak adhyayanam*. BHU. Dr. Chandrama Pandeya, Reader, Department of Jyotish, Banaras Hindu University, Varanasi.

11. Unnikrishnan Nair, C.R. *The concept of yoga in the yogasutra of Patanjali in comparison with mysticism*. Kerala. Dr. Jacob Kattackal, Centre of Vedanta Studies, University of Kerala, Kariavattom.

12. Vasantha Prasad, M.C. *The bhakti concept of Ramanuja and the Biblical doctrine of faith : A comparative study*. Kerala. Dr. Jacob Kattackal, Centre for Vedanta Studies, University of Kerala, Kariavattom.

Punjabi

1. Ajit Singh. *A critical study of geographical and cosmological references in the Janamsakhis*. Panjab. Prof. Surinder Singh Kohli, School of Punjabi Studies, Panjab University, Chandigarh.

2. Avtar Singh. *Nirgun kavya de sandarbh vich Bani Bhagat Namdev : Ek viveehan*. Panjab. Prof. Darshan Singh, Department of Guru Nanak Sikh Studies, Panjab University, Chandigarh and Dr. Dharam Singh, Reader, Department of Punjabi, Guru Nanak Dev University, Amritsar.

3. Harbans Kaur. *Medieval Indian society as reflected in the Bani of Guru Nanak*. Panjab. Prof. Darshan Singh, Department of Guru Nanak Sikh Studies, Panjab University, Chandigarh and Dr. Mohinder Singh, Director, Guru Nanak Foundation, New Delhi.

4. Sharma, Vas Dev. *Cosmic view of life in Guru Nanak bani*. Panjab. Prof. Darshan Singh, Department of Guru Nanak Sikh Studies, Panjab University, Chandigarh and Dr. S.S. Bhatti, Chairman, Department of Physics, Panjab University, Chandigarh.

Hindi

1. Chandrasekhar, Raji. *Adhunik Hindi geeth sahitya rekshtra navanirman ke pariprekshya mein*. Kerala. Dr N. Chandrasekharan Nair, Prof. and Head, Department of Hindi, M.G. College, Trivandrum.

2. Girija Kumari, R. *Individual and social consciousness in the poetry of Sarveswar Dayal Saxena.* Kerala. Dr. V.V. Viswom, Prof., Department of Hindi, Govt. Women's College, Trivandrum.
3. Sethunathan Achary, R. *Kathakar Ajneya ka patra manovaigyanik adhyayan.* Kerala. Dr. M. Suresh, Lecturer, Department of Hindi, S.N. College, Quilon.

Malayalam

1. Anilkumar, K. *Evolution of poetic language in Malayalam.* Kerala. Dr. P. Ramachandran Pillai, Prof. and Head, Department of Malayalam, University of Kerala, Trivandrum.

Geography

1. Anil Kumar. *Population migration in Madhya Pradesh : A geographical analysis.* HS Gour. Prof. R.S. Dube, Reader, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.
2. Jain, Avanesh Kumar. *Environment food habits and deficiency diseases in tribal areas of the Batul Chhindwara Plateau, M.P.* HS Gour. Dr. P.D. Tiwari.
3. Jain, Rekha. *Urban growth and quality of life : A geographical study in cities of Madhya Pradesh.* HS Gour. Dr. D.S. Srivastava, Reader, Department of Geography, Dr. Hari Singh Gour Vishwavidyalaya, Sagar.
4. Jain, Savita. *Educational levels in Madhya Pradesh : A geographical analysis.* HS Gour. Dr. D.S. Srivastava, Reader, Department of Geography, Dr. Hari Singh Gour Vishwavidyalaya, Sagar.
5. Mishra, Seema. *Ecosystem, food cansumption, nutritional and health status of Baiga's in Dindori Tahsil, Mandla District M.P.* HS Gour. Dr. P.D. Tiwari.
6. Mulay, S.B. *Agricultural land use and land degradation in Goa.* Shivaji. Dr. S.D. Shinde, Prof. and Head, Department of Geography, Shivaji University, Kolhapur.
7. Patil, J.B. *Spatial organization and linkage of agricultural regulated markets in Upper Krishna Basin.* Shivaji. Dr. P.W. Deshmukh, Reader, Department of Geography, Shivaji University, Kolhapur.
8. Shinde, S.R. *A study of some aspects of horticultural development in Maharashtra Plateau Region.* Shivaji. Dr. K.S. More, Department of Geography, Shivaji University, Kolhapur.
9. Soni, Manoj Kumar. *Industrialisation ana rural transformation in the Indore, Dewas Ujjain industrial traingle region of Madhya Pradesh.* HS Gour. Dr. S.K. Shukla, Reader, Department of Geography, Dr. Hari Singh Gour Vishwavidyalaya, Sagar.

History

1. Pandey, Rakesh. *Transfer of power, 15th August, 1947.* BHU. Dr. J.P. Mishra, Department of History, Banaras Hindu University, Varanasi.

THESES OF THE MONTH

A List of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Psychology

1. Joshi, Renuka. *A study of creativity in relation to personality, locus of control and alienation.* Panjab.
2. Kolarkar, Shakuntala Sharadchandra. *What weighs in the selection of a life-partner ?* Nagpur. Dr. C.G. Pande, Department of Psychology, Nagpur University, Nagpur.
3. Krishnan, Usha. *The role of motivational and cognitive factors in the differences of person perception and liking for others.* Durgawati. Prof. R.K. Gurnani, 11/1 Matre Chhaya, Wrigh Town, Jabalpur.
4. Madhumati. *An exploration into some socio-psychological antecedents of fear of crime.* Magadh.
5. Malhi, Prabhjot. *Concept and prose learning in children as a function of individual and stimulus differences in imagery.* Panjab.
6. Pradeep Kumar. *Patterns of educational interests in relation to creativity.* Rohilkhand. Dr. Gopal Sharan, Govt. Raza PG College, Rampur.
7. Satish Kumar. *Organizational and personal determinants of job involvement and job satisfaction of supervisors in public and private companies.* Magadh.

Sociology

1. Patnaik, Ajay Kumar. *Patterns of urbanization and growth of working class in the Soviet Union, 1950-1975 : A case study of Soviet Central Asia.* JUN. Prof. R.R. Sharma, Centre for Soviet And East European Studies, Jawaharlal Nehru University, New Delhi.
2. Shrivastava, K.K. *Tribals and forest industries of the Bastar Region of M.P. : A socio-economic study.* Bhopal. Dr. I.S. Chouhan, Prof. and Head, Department of Sociology, Bhopal University, Bhopal.
3. Thakur, Damyanti. *Chhatra asantosh : Guru Ghasidas Vishwavidyalaya ke snatakottar vidyarthiyon ka ek samajshastriya adhyayan.* Ghasidas. Dr. P.K. Thavait.

Political Science

1. Banjamin, K. *American strategic interest in Persian Gulf.* Osmania.
2. Bhattacharya, Bharati. *Bharat kee asanglagnata ke prati Soviet Sangh ka drishtikon : Ek adhyayan.* Ghasidas. Dr. R.N. Mitra.
3. Gupta, Akhilesh. *Swami Vivekanand ke rajnitik evam samajik vichar.* Rohilkhand. Dr. N.C. Mehrotra, SM College, Chandausi.
4. Joshi, Rekha. *Swatantrata prapti ke pashchat Dakshin-Pashchim Madhya Pradesh kee adivasi mahilaon mein rajnitik chetana evam sahabhagita.* Devi Ahilya. Dr. Arvind Maru, University Boarding House, A. B. Road, Indore.
5. Kanwar, Anila. *Gandhiji ke prajatantrik vikendrikaran sambandhi vicharon ka vartman mein mahatva.* Vikram. Dr. Ajhar Hashmi, Department of Political Science, Govt. College Ratlam.

6. Lalchungunga. *Regionalism in Mizoram politics.* NEHU. Prof. C.N. Bhalerao, Department of Political Science, North Eastern Hill University, Shillong.

7. Sindhu, I.D. *Trends in voting behaviour : A comparative study of the 1977, 1980 and 1982 elections in six Assembly Constituencies of Himachal Pradesh.* HP.

8. Thirupathi Reddy, K. *Legislative process in India : Role of the Speaker in the A.P. Legislative Assembly 1956-87.* Osmania.

9. Vijayalakshmi, K.P. *The United States and the Non-Aligned Movement with special reference to the New World Information Order, 1969-1980.* JNU. Prof. R.P. Kaushik, Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

Economics

1. Adeshola, Olunuga O. *Financial management in commercial banks : A study of selected Indian banks.* Baroda.

2. Agarwal, Shalabh Kumar. *Bycycle Industry in Haryana.* Rohilkhand. Dr. D.K. Kulshreshtha, Hindu College, Moradabad.

3. Gupta, Neeta. *Management of nationalised Bus Transport in Punjab.* Rohilkhand. Dr. D.K. Kulshreshtha, Hindu College, Moradabad.

4. Gupta, Sandhya. *Madhya Byarat kshetra mein shram sanghon ka vikas. uplabdhiyan evam vartman samasyayen.* Vikram. Dr. (Mrs) T.K. Vazdi, Department of Economics, Devi Ahilya Vishwavidyalaya, Indore.

5. Gupta, Shailesh Narain. *Rohikhand Mandal ke shahari kshetra mein berojgari : Ek adhyayan,* Rohilkhand. Dr. H.C. Gurnani, N.M.S.N. Dass College, Budaun.

6. Khare. Rajendra Kumar. *Farm business analysis of agro-climatic regions of Madhya Pradesh.* Durgawati. Dr. R.R. Chaurasia, GII, Krishi Nagar, Adhartal, Jabalpur and Dr. P.C. Shrivastava, Kamla Sadan, Yadav Colony, Jabalpur.

7. Parvinder Kaur. *Agriculture in mineral economies : Nigeria and Gabon.* Delhi.

8. Sundari, S. *Economic aspects of nationalisation of bus transport in Tamil Nadu.* Bharathidasan.

Law

1. Mool Singh. *Indian criminal jurisprudence and Justice Krishna Iyer : An appraisal.* Rajasthan. Prof. T. Bhattacharya, C-9 University Campus, Jaipur.

Public Administration

1. Singh, Manoranjan Pd. *Materials management in Bihar State Electricity Board.* Magadh.

Military Studies

1. Gautam, Hem Kumar. *Geo-political study of South-West Asia since 1970.* Rohilkhand. Dr. O.P. Sharma, Bareilly College, Bareilly.

2. Khan, Azmat Ullah. *A critical study of evolution of Indian Army, 1757-1857.* Rohilkhand. Dr. O.P. Sharma Bareilly College, Bareilly.

Education

1. Agarchand, Satishkumar. *A study of teacher effectiveness among different groups of teachers in relation with personality traits.* Patel. Dr. A. V. Patel, Lecturer, M.B. Patel College of Education, Sardar Patel University, Vallabh Vidyanagar.

2. Baruah, Jyotsna. *An evaluation of pre-school institutions in Assam with special reference to teaching methodology.* Gauhati. Dr. S. Saikia, Prof., Department of Education, Gauhati University, Guwahati.

3. Bhasin, Chanchal. *Teaching aptitude and its relationship with teaching effectiveness of the higher secondary school teachers in relation to the modern community.* Durgawati. Dr. R.P Shrivastava, 1286, Jaiprakash Colony, Adhartal. Jabalpur.

4. Bhupendra Singh. *A study of some possible contributing factors to high and low achievement in Mathematics of the high school students of Orissa.* Sambalpur. Dr. G.K. Samantaray, Prof. (Retd.), Department of Education, Roybabu Kholli Jeypore, Koraput.

5. Eapen, Rachel Lalitha. *Extensive reading at the tertiary level for the low achiever : A case study.* CIEFL. Dr. Rama Mathew, Department of Evaluation, Central Institute of English and Foreign Languages, Hyderabad.

With Best Compliments

From :

★

Dhanpat Rai & Sons

Educational & Technical Publishers

1682, Nai Sarak,
Delhi-110006

Ph : 265367

6. Gupta, Archana. *A study of academic achievement in relation to intelligence, adjustment, parent income and parent child relationship of secondary school students whose parents belong to different professions.* Rohilkhand. Dr. R.N. Saxena, Hindu College, Moradabad.

7. Henia, Ashikho. *A study of the growth and development of education in Manipur 1947-1968.* JNU. Prof. S.C. Ghosh, Zakir Husain Centre for Educational Studies, Jawaharlal Nehru University, New Delhi.

8. Mathema, Sunder Shyam Bhagat. *Wastage in teacher education in secondary schools of Nepal as related to intelligence, personality, vocational aspirations and attitude towards teaching of dropouts from the profession.* Panjab.

9. Mehra, Vandana. *Effectiveness of an integrated system of instruction for concept and principle learning in different school climates at secondary level.* Panjab.

10. Patel, Dinesh Dhulabhai. *A study of the effect of productive thinking programme in geography on creativity of students of class-IX.* Patel. Dr. J.Z. Patel, Reader, M.B. Patel College of Education, Sardar Patel University, Vallabh Vidyanagar.

11. Radha Rani. *Construction and standardization of an academic alienation scale and its relationship to demographic variables.* HP.

12. Subba Rao, Rajarathna. *A study of the attitude of parents and teachers from rural and urban areas towards population education.* Durgawati. Dr K.C. Malaiya, Prof. (Retd), Yadav Colony, Jabalpur.

Commerce

1. Ashok Kumar. *Analytical study of the working of non-nationalised banks of U.P. since 1969.* Rohilkhand. Dr. D.K. Kulshreshtha, Hindu College, Moradabad.

2. Garg, Praveen Kumar. *Working and living conditions of labour in large scale industries of District Rampur.* Rohilkhand. Dr. J.K. Jain, Govt. Raza PG College, Rampur.

3. Jain, Kumkum. *Bharat mein upbhokta sanrakshan : Sahkari kshetra ka yogdan; Madhya Pradesh ke vishesh sandarbh.* mein. HS Gour. Dr. S.P. Johri, Principal, Govt. College, Timarni.

4. Prachandia, Sanjeev. *Socio-economic conditions of labour in lock industry of Aligarh.* Rohilkhand. Dr. D.K. Kulshrestha, Hindu College, Moradabad.

5. Rathnaswami, P. *A study of internal communication practices in public sector under takings.* Rohilkhand. Dr. N.L. Sharma, Bareilly College, Bareilly.

6. Vakliwal, Rajkumar. *Bharat mein Skandh Vipani evam pratibhooti-mulya-Bambai Skandh Vipani ke vishesh sandarbh mein.* Vikram. Dr. R.P.S. Rana, Principal, Govt. Hamidia Arts and Commerce College, Bhopal.

Home Science

1. Bansal, Shail. *Comparative study of the time expenditure pattern of working and non working women.* Vikram. Dr. (Mrs) Asha Nimkar, Department of Home Science, Vikram University, Ujjain.

Management

1. Kulwant Singh. *Cooperative agricultural credit utilisation in Himachal Pradesh.* HP.

2. Moses, Anuloam Uba. *Management control systems in oil industry : A case study of Indian Oil Corporation Limited.* Delhi.

With

Best

Compliments

From :

Navchetan Press (P) Ltd.

Printers & Phototype Setters

1-E/2, Jhandewalan Extension
NEW DELHI-110055
Phone 529157

PANJAB UNIVERSITY PUBLICATIONS

Selected Scholarly Titles in English from Our Expanding List

LITERARY CRITICISM & LINGUISTICS

		Rs. P.
Ghalib and Iqbal by Prof. Ish Kumar		50.00
The Melody of An Angel (Mirza Ghalib—His Mind and Art) by Prof. Ish Kumar		40.00
Studies in Indian Poetry by Prof. G.S. Talib		65.00
Bhai Vir Singh : Life, Time and Works, Prof. G.S. Talib & Prof. Attar Singh, ed.		24.00
Nehru and Indian Literature, Dr. V. N. Tewari, ed.	(Hard bound)	50.00
	(Paper back)	40.00
A Study of Loan Words in Central Pahari by Dr. D.D. Sharma		40.00
Syllabic Structure of Hindi and Punjabi by Dr. D.D. Sharma		30.00

HISTORY

Punjab. Central Asia & the First Afghan War by Dr. Hari Ram Gupta		120.00
North-Western Frontier and British India : 1939-42, Dr. P.L. Mehra; ed.	Vol. I	125.00
	Vol. II	140.00
Socio-Cultural Impact of Islam on India, Dr. Attar Singh, ed.		30.00
Punjab on the Eve of First Sikh War (Revised edition) Dr. Hari Ram Gupta, ed.		50.00
The Jallianwala Bagh Massacre : A Premeditated Plan (Revised edition) by Dr. Raja Ram		25.00
Marathas and Panipat by Dr. Hari Ram Gupta		20.00
Life and Letters of Sir Jadunath Sarkar, Dr. Hari Ram Gupta, ed.		25.00
Essays Presented to Sir Jadunath Sarkar, Dr. Hari Ram Gupta, ed.		25.00

INDIAN ART & PHILOSOPHY

An Approach to Indian Art (second edition) by Dr. Niharranjan Ray	75.00
Nature of Violence, Dr. Bhuvan Chandel, ed.	25.00
Search for Roots by Baldoon Dhingra	30.00
Indian Idealism and Modern Challenges by Dr. P.T. Raju	10.00
Hinduism and the West by K.M. Panikkar	5.00

SIKH HISTORY & PHILOSOPHY

Guru Tegh Bahadur—A Study by Dr. B. S. Gupta	25.00
Philosophy of Guru Nanak (second edition) by Dr. S.S. Kohli	27.00
Travels of Guru Nanak (second edition) by Dr. S.S. Kohli	26.00
Guru Nanak in History (second edition) by Dr. J.S. Grewal	40.00
Guru Gobind Singh : A Biographical Study by Dr. S.S. Bal & Dr. J. S. Grewal	30.00
Life of Guru Nanak (second edition) by Dr. S.S. Bal	60.00
Guru Nanak in the Eyes of Non-Sikhs (second edition) by Dr. S.S. Bal	60.00

GANDHIAN THOUGHT

Gandhi and Indian National Congress, Dr. S.L. Malhotra, ed.	80.00
Gandhi, Punjab and the Partition by Dr. S.L. Malhotra	70.00
From Civil Disobedience to Quit India by Dr. S.L. Malhotra	40.00
Gandhi—An Experiment with Communal Politics by Dr. S.L. Malhotra	30.00
Gandhi and the Punjab by Dr. S.L. Malhotra	15.00
Humanism of M.K. Gandhi by Dr. Mulk Raj Anand	3.00
Gandhian Thought by J.B. Kripalani	8.75

Please Write for Catalogues, Trade Enquiries and Orders to :

The Secretary
PUBLICATION BUREAU
PANJAB UNIVERSITY
CHANDIGARH

Kurukshetra University, Kurukshetra

LIST OF PUBLICATIONS

1.	The Glassy Essence (English)—Dr. B.S. Gupta		Rs. 70-00
2.	Guru Partap Suraj Ke Kavya Paksha Ka Adhyayana (Hindi)—Dr. Jai Bhagwan Goyal		Rs. 48-00
3.	Jayasi Kavya Ka Sanskritik Adhyana (Hindi)—Dr. Bhim Singh Malik		Rs. 65-00
4.	Guru Mukhi Lipi Mein Rachit Punjab Ka Hindi Kavya (Hindi)—Dr. (Mrs.) Shakuntla Nalin		Rs. 25-00
5.	Kusumanjali Karika Vyakhya of Narayana Tritha—Dr. Shri Niwas Shastri		Rs. 20-00
6.	Vachaspati Mishra Dwara Baudha Darshana Ka Vivechana (Hindi)—Dr. Shri Niwas Shastri		Rs. 55-00
7.	Sattrimsattattva-Sandoha (A Text of Trika Philosophy of Kashmir) With the Commentary of Rajanaka Ananda Kavi (English)—Dr. D.B. Sen Sharma		Rs. 17-00
			Rs. 15-00
8.	Vaiyakaran-Siddhanta Param Laghu-Manjusha (Hindi)—Dr. K.D. Shastri		Rs. 75-00
9.	Vedic Rishi : Eka Parisilana (Hindi)—Dr. K.D. Shastri		Rs. 50-00
10.	The Ganpatha Ascribed to Panini (English)—Dr. Kapila Deva Shastri		Rs. 80-00
11.	Pada-Padartha Samiksha (Hindi)—Dr. Baldeo Singh		Rs. 60-00
12.	Grantha-Suchi—Shri Sthanu Datt Shastri	Vol. I	Rs. 18-00
		Vol. II	Rs. 18-00
13.	Dayanand-Darshana : Eka Adhyayana (Hindi)—Dr. Shri Niwas Shastri		Rs. 12-75
14.	Veda Tatha Rishi Dayanand (Hindi)—Dr. S.N. Shastri		Rs. 20-50
15.	Sri Kurukshetra Mahakavyam (Sanskrit)—Shri D.P. Shastri		Rs. 10-00
16.	Ved Pramanya Mimansa Tatha Rishi Dayanand (Hindi)—Dr. S. N. Shastri		Rs. 50-00
17.	Abhidharamdeshna : Both Siddhanton Ka Vivechan (Hindi)—Dr. D.C. Jain		Rs. 115-00
18.	Ved Nityata Tatha Rishi Dayanand (Hindi)—Dr. S.N. Shastri		Rs. 32-00
19.	Meghaduta-Tika of Krishnapati—Dr. *Gopikamohan Bhattacharya*		Rs. 15-00
20.	A Descripiive Grammar of Bangru (English)—Dr. Jag Deva Singh		Rs. 50-00
21.	Pinjore Sculptures (English)—Dr. Udai Vir Singh		Rs. 37-00
22.	Excavation at Mitathal (1968) and other Exploration in the Sutlej-Yamuna Divide (English)—Dr. Suraj Bhan		Rs. 54-00
23.	Agricultural Taxation in Haryana (English)—Dr. P.C. Jain		Rs. 45-00
24.	Glimpses of Hariyana (English)—Late Dr. Budha Prakash		Rs. 30-00
25.	Haryana Studies in History and Cultural (English)—Dr. K.C. Yadav		Ra. 30-00
26.	Hariyana Through The Ages (English)—Late Dr. Budha Prakash		Rs. 15-00
27.	The System of Land Holdings in Haryana—A Cost Output Analysis (English)—Dr. Ram Chander		Rs. 30-00
28.	Development of Education in India 1947-66 (English)—Prof. Uday Shankar and Dr. S.P. Ahluwalia		Rs. 35-00
29.	Research Naeds in the Study of Education (English)—Prof Udya Shankar and Dr. S.P. Ahluwalia		Rs. 40-00
30.	A Comparative Study of Teacher Effectiveness Through The Four Years Concurrent Course And The One Year Successive Course (English)—Mrs. Lakshmi Shankar		Rs. 6-25
31.	Education in Haryana : Retrospect & Prospect (1800-1996) (English)—Prof. Uday Sankar & Dr. C.L. Kundu		Rs. 50-00
32.	Abstracts of M.A. (Education) and M.Ed. Dissertations Vol. I to IX		Rs. 139-25
33.	Battery Attainment Tests in English—Dr. H.C. Sinha & R.N. Gaur		Rs. 12-00
34.	Descrtptive Index (Vol. I) 1979 Hand written Sanskrit Manuscripts in the University Lib. (Sanskrit)—Shri Sthanu Datt Shastri		Rs. 15-00
35.	Sculpture and Terracottas in the Archaeological Museum, Kurukshetra University (Hindi)—Shri S.P. Shukla		Rs. 62-00
36.	Environment and Biotic Interaction—Shri A.K. Dattagupta and Shri R.P. Maleyvar		Rs. 80-00
37.	Gita Aur Upanishadon Mein Upalabdha Sankhya Siddhanton-Ka-Samikshatmaka Adhyayan—Dr. Chander Shekher Sharma, Head of Deptt. of Sanskrit, D.A.V. College, Karnal		Rs. 56-00
38.	Rishi Dayanand Krit Yajurveda Bhasya Mein Agni Ka Sawroopa : Eka Parisilan—Dr. Kapil Dev Shastri		Rs. 232-00

All enquiries may Please be addressed to

MANAGER
Printing & Publications,
Kurukshetra University,
Kurukshetra—132 119

SOME MONUMENTAL WORKS FROM COSMO

LANDMARKS IN INDIAN ANTHROPOLOGY

(In 74 Volumes)

1987 25000pp Illus. Sizes 14.5 × 22.5 cm 16.5 × 25 cm and 21.5 × 28 cm

Rs 17500 set

Collection of reprint and original works of eminent scholars—Indian & Foreign dealing extensively with Castes, Creeds, Cultures, Customs, Religions, Philosophy, Ideologies, etc. of the oldest centre of civilization in the world that is India. The text covers every aspect and provides valuable informative material on Indian Anthropology and its evolution through the ages. The wide range and variety of subjects dealt with in these volumes present a panoramic view of the civilisation and culture of the Indian sub-continent in its different facets in different periods of time. A monumental work indeed.

INDIAN HISTORICAL RESEARCHES

(In 78 Volumes)

1987 25000pp Sizes 14.5 × 22.5 cm 16.5 × 25 cm 21.5 × 28 cm

Rs 18500 set

This is a vast and magnificent work spread over 78 volumes covering all vital dimensions of India's material, historic, political and social past. A great deal of effort has gone in the investigations into ancient times by several eminent Western scholars whose probity and credential are in direct proportion to their outlooks and approaches. This book includes apart from painstaking historical studies of the regions and ages of India covering ancient, mediaeval and modern phases; scientific studies into Hindu astronomy and mathematics, specialist themes like Mughal gardens, Princes of India, South Indian Dynasties and covering even the neighbouring areas of Nepal, Sikkim, Tibet and Afghanistan. These volumes contain a rich face of multiple themes and approaches and will undoubtedly serve as a major research tool to scholars and academicians.

REDISCOVERING INDIA

INDIAN PHILOSOPHY LIBRARY

(In 71 Volumes)

1987 25000pp Illus. Sizes 14.5 × 22.5 cm 16.5 × 25 cm 21.5 × 28 cm

Rs 13500 set

A comprehensive, finite and compact presentation on the system of Philosophy in India and their nuances. Based on contributions and painstaking translations of eminent scholars—both Indian and foreign—the work covers all aspects of Indian philosophy drawing upon accumulated legacy of last four millennia and half and rich contents of ancient Sastras like Nayaya, Tarka, Vedanta Upanishads and Sakhya Yoga to which Vyasa and Patanjali made invaluable contributions. The publication also throws substantials light on the philosophies and teachings of Buddhism, Jainism, Zoroastnan thoughts, teachings of Prophet Mohammad and illustrious saints of Sufism. All in all the work ornamented with illustrations, is an amalgamation of all schools of thought that constitute Indian Philosophy.

Published by :
Cosmo Publications
New Delhi-110 002 (India)

Distributed by :
UBS Publishers' Distributors Ltd.
5 Ansari Road, New Delhi-110 002 (India)

Alagappa University, Karaikudi

Highlights

1. Established in May 1985, the University was recognised by the University Grants Commission in December 1986.
2. This is the eleventh University in Tamilnadu and of Unitary type which aims at developing itself into a research University ; its motto is "Excellence in Action".
3. The University has 9 full-fledged departments of teaching and research with 70 faculty members and 650 students at Post Graduate and Research level. It has a sprawling campus of about 420 acres
4. Full-time and Part-time research at M. Phil. and Ph.D. level are offered in all disciplines. Summer Sequential M. Phil. Programmes are also in progress.
5. Student's Stipendary Fellowships are awarded in each discipline for the pursuit of full-time Ph.D. Programme.
6. Unique in the whole of India are the M. Phil. Education of Inter-disciplinary nature and M.A. Corporate Secretaryship courses offered by the University.
7. Socially relevant courses of study in advanced spheres of Science include a three year M C.A. (Master of Computer Applications) and two year M. Sc. in Industrial Chemistry with specialisation in Electro Chemistry and Textile Chemistry.
8. The new courses introduced in the current academic year are M. Sc. Physics with Instrumentation as specialisation, M. Com. with Entrepreneurship as specialisation, M A. Women's Studies and M.A. Adult Education.
9. The Centre for Women's Studies and Rural Technology established in 1987 conducts research on identified (priority) areas and subjects which are crucial in the advancement of knowledge and expansion of the information base.
10. The Centre for Rural Technology has computer oriented, science oriented and management oriented programmes like :

(i) COME FORWARD	(Computer oriented Modernised Education for Women's Avocation and Rural Development)
(ii) WE SPREAD	(Women's Extension Service for Planned Rural Enrichment and Development)
(iii) PRIDE	(Programme for Rural Industrial Development and Entrepreneurship)

for development of rural womenfolk.

11. M. Phil. courses in Industrial Sports and Labour Welfare and a Course in Recreation and Sports Journalism are to be introduced shortly.
12. Under the Distance-cum-Contact programme, Diploma Courses are being offered in Computers and Application Software.
13. The University proposes to start M.B.A. programme with the approval of the A.I.C.T.E. from the academic year 1989-90 and plans to start Post-Graduate Programmes in Atmospheric Physics, Applied Mathematics and Educational Technology.
14. In tune with the major objectives of the University, National and Regional Seminars/Workshops in various disciplines are organised periodically. An U.G.C. sponsored National Seminar on Temple Arts and Architecture was held during October 1988.

Post Graduate Institute of Medical Education & Research, Chandigarh

ADMISSION NOTICE NO. 6/88 (ACAD.)

Applications, on prescribed form, are invited for the following courses, etc. for the academic session starting from January, 1989.

I. **Second Year Junior Residents**—2 for MDS Course Part-I in the speciality of Orthodontics. One post is reserved for a candidate belonging to Sch. Castes/Tribes.

Eligibility Qualifications :

1. BDS passed from a recognised University/Institute.
2. Must have completed one year house job in Dentistry in a hospital recognised by the Dental Council of India.

II. **Ph.D. Programme** seats are available in the Department of Obst. & Gynae.

Eligibility Qualifications :

M. Sc. degree in Microbiology from a recognised University/Institute.

The course at I above is under the Panjab University for which candidates other than those belonging to Sch. Castes/Tribes having more than one failure during BDS career are not eligible. Sch. Castes/Tribes candidates with upto two failures during their BDS course will be eligible.

2. Those applying for the reserved seat must append with their applications, a certificate from the District Magistrate concerned in support of their claim. No other certificate will be entertained.

The application must be accompanied with non refundable fee of Rs. 30/- in the form of postal order drawn in favour of the Director of the Institute for each of the courses mentioned above.

Application form and detailed information regarding eligibility qualifications etc., are available from the office of the undersigned either personally on payment of Rs. 5/- at the counter (from 11 AM to 12 Noon on all working days) and 3 PM to 4 PM (on all working days except Saturdays) or by post for which the request must be accompanied with a self addressed envelope size (25 x 10 cms) bearing postage stamps of Rs. 3 40 and crossed postal order for Rs. 5/- in favour of the Director of the Institute.

Closing Date for the receipt of application is **24th December, 1988.**

REGISTRAR

Department of Civics and Politics UNIVERSITY OF BOMBAY

Ph.D. FELLOWSHIPS IN INTERNATIONAL RELATIONS

The Department received a grant from the Ford Foundation in support of its international relations programme. Ph.D. fellowships are an important constituent of this effort to enhance research and teaching in the field. Three research fellowships on par with the UGC's Junior fellowships will be given beginning from March, 1989. Preference will be given to recent M.A.'s (in or after 1985) with a consistently good academic record and high research potential. Minimum qualification required in an M.A. with high second class.

Selected candidates will receive help for typing the dissertation. Field trip within the country will also be possible in deserving cases. Continuation of the fellowship is subject to an annual review of research work done. Candidates called for interview will be paid second class train fare both ways.

Applications must be submitted in the prescribed form, which can be obtained free of charge from the Department of Civics and Politics, University of Bombay, Kalina Campus, Bombay 400 098. Application fees of Rs. 50/- in the form of a crossed demand draft in favour of "The Registrar, University of Bombay", must accompany the duly filled form. The application fees is non-refundable. Letters asking for the forms should clearly be marked "Attn : Ford Foundation Fellowships". Last date for receiving the application is **31st January, 1989.**

B. Ramesh Babu

HEAD OF THE DEPT.

Question Bank Book Series

Teaching and Examination Made Richer & Effective

The type of questions, objective type short answer, long answer and objective type that could be on a particular topic are included in the volumes. These are aids for teaching and preparing for examinations including the competitive and entrance tests. Question banking takes into account all the techniques of testing and evaluation. Each title contains anything between 2000 and 6000 items of varying degree.

QUESTION BANKS AVAILABLE IN FOLLOWING SUBJECTS :

Undergraduate Level

	Rs.
1. Mathematics	80.00
2. Chemistry	75.00
3. Botany	40.00
4. Geography	35.00
5. Economics	45.00
6. Physiology	45.00
7. Political Science	35.00
8. English Language & Literature	30.00
9. Automobile Engineering	35.00
10. Physics	40.00
11. Zoology	50.00
12. History	25.00
13. Psychology	55.00
14. Commerce	45.00
15. Law of Contracts	25.00
16. Sociology	45.00
17. Foods & Nutrition	25.00
18. Pharmacology	35.00
19. Anatomy (Medicine)	60.00
20. Constitutional Law	35.00
21. Electrical Power System (Engg.)	75.00
Zoology (*Hindi Script*)	100.00
Botany	In Press
Chemistry	160.00

Postgraduate Level

Mathematics	85.00

Under Preparation

Undergraduate Level

Strength of Materials (Engg.)

Library Classification (Library Science)

Postgraduate Level

English Literature

BOOKS ALSO AVAILABLE WITH LEADING BOOKSELLERS IN THE COUNTRY

Address Enquiries to:

Under Secretary (Publications)

ASSOCIATION OF INDIAN UNIVERSITIES

AIU House, 16 Kotla Marg, New Delhi 110002

Telephones : 3310059, 3312305, 3313390 & 3312429

Gram : ASINDU

Telex : 31-66180 AIU IN

SHIVAJI UNIVERSITY, KOLHAPUR
ACADEMIC PUBLICATIONS (In English)

1.	**Experimentation with Language in Indian Writing in English-Fiction** 1974 Editor, Dr. S.K. Desai	Rs. 5-00
2.	**Weekly Markets and Fairs in South Ratnagiri District** 1977 Dr. M.D. Tawade	Rs. 5-00
3.	**Ecogeographical Studies in Vashisti and Terekhol Rivers** 1978 Dr. G.V. Joshi and Dr. S.D. Shinde	Rs. 10-00
4.	**Rajarshi Shahu Chhatrapati Papers--Vol-1 1884-1894 (Adoption to Installation)** 1978 Dr. A.G. Pawar	Rs. 50-00
5.	**Non-Brahmin Movements in Southern India (1873 to 1949)** 1979 Dr. K.K. Kawalekar	Rs. 30.00
6.	**Studies in Shivaji and His Times** 1982 Dr. B.R. Kamble	Rs. 32-00
7.	**Rajashri Shahu Chhatrapati Papers Vol-2, 1894-1900 A.D. (Early Administrative Reforms)** 1983 Editors Dr. Vilas Sangave and Dr. B.D. Khane	Rs. 75-00
8.	**Rajarshi Shahu Chhatrapati Papers Vol-3, 1900-1905 A.D. (Vedokta controversy)** 1985 Editors Dr. Vilas Sangave and Dr. B.D. Khane	Rs. 90-00
9.	**Solid State Energy Conversion** 1986 Editors S.H. Pawar, C.H. Bhosale, R.N. Patil	Rs. 100-00
10.	**The Mangroves** 1986 Executive Editor Dr. Leela G. Bhosale	Rs. 200-00
11.	**Solar Energy and Rural Development** *1988 Editors S.H. Pawar, C.D. Lokhande, R.N. Patil*	*Rs. 150-00*
12.	**Energy Resources Through Photoelectrochemical Routes** 1988 Editors S.H. Pawar, Ved Mitra, B. Venkataraman	Rs. 125-00

Please Write for Catalogues, Trade Enquiries and Order to :

THE REGISTRAR
SHIVAJI UNIVERSITY
Vidyanagar, Kolhapur-416 004. (India)

Recent Books on Environmental Studies/Pollution/Ecology/Geography & Education

1.	Ecology of Rural/Urban India (in 2 vlms.) by Pramod Singh	Rs. 550/-
2.	Environmental Awareness and Urban Development by I. Mohan	Rs. 200/-
3.	Environment and Entrepreneur by Arvindra N. Desai	Rs. 200/-
4.	Environmental Concept Development in Children by P. Rout	Rs. 175/-
5.	Environmental Concerns and Strategies	Rs. 400/-
6.	Environment Management in India (in 2 vlms.) by R.K. Sapru	Rs. 500/-
7.	Environmental Pollution by Yogendra N. Srivastava	Rs. 75/-
8.	Environmental Pollution and Health Hazards in India by R. Kumar	Rs. 200/-
9.	Ecology and Pollution of Indian Rivers by R.K. Trivedy	Rs. 350/-
10.	Himalayan Ecology by S.K. Chadha	Rs. 100/-
11.	Problem of Wasteland and Forest Ecology of India by Pramod Singh	Rs. 350/-
12.	Rural Energy : Consumption, Problems and Prospects by D.R. Veena	Rs. 250/-
13.	Education System : Problems and Prospects	Rs. 200/-
14.	Education in Rural Areas : Constraints and Prospects by A.S. Seetharamu	Rs. 100/-
15.	Hundred Years of Allahabad University by M L. Bhargava	Rs. 250/-
16.	Integral Education : Thought and Practice by R.N. Pani	Rs. 450/-
17.	Lifelong and Adult Education by S B. Mohanty	Rs. 150/-
18.	School Management by Upendra Nath Panda	Rs. 100/-
19.	Student Teaching by S B. Mohanty	Rs. 100/-
20.	Development and Change in India by R.T. Tewari and A. Joshi	Rs. 400-

SEND YOUR ORDERS TO :

Ashish Publishing House
8/81, PUNJABI BAGH, NEW DELHI-110026.
Phones : 500581 and 5410924.

MADRAS UNIVERSITY

LATEST PUBLICATIONS

Sl. No.	Title	Author	Amount Rs. P.
1.	Mahatma Gandhi	Dr. T.S. Devadoss	1-25
2.	Saivaparibhasa of Sivagrayogin	Dr. R. Balasubramanian and V.K.S.R. Ragavan	25-00
3.	The Naiskarmyasiddhi of Suresvara	Dr. R. Balasubramanian	70-00
4.	A Study of Sivagnana Siddhiyar Parapakkam	Dr. R. Gopala-Krishnan	20-00
5.	Mythis of Science and Technology	Earl. R. Maccormac	14-00
6.	Utilitarian Perspectives	Dr. U. Mohamed Kasim	25-00
7.	Sri Lanka after Independence Nationalism Communalism and Nation Building	Sinnappah Arasaratnam	20-00
8.	Comparative Grammar of the Dravidian	Rev. Robert Caldwell	30-00
9.	Thirukkura of Thiruvalluvar in Hindi	Dr. Sankar-Raju Naidu	10-00
10.	Chilappadhiharam of Elango Adigal in Hindi	-do-	20-00
11.	Taittiriyoparisad Bhasya Vartika of Suresvara	Dr. R. Balasubramanian	65-00

Centre for Social Studies, Surat

ICSSR DOCTORAL FELLOWSHIP 1988-89

The CENTRE has 1 ICSSR Fellowship in the field of Political Science, Sociology and History.

The Fellowship is open to Indian citizens preferably below the age of 30 years (35 years for SC/ST/handicapped and employed scholars). Candidates who hold a Master's Degree in Social Sciences in First/Second Class and who are registered or likely/eligible to be registered with South Gujarat University, Surat, may apply.

The value of the fellowship is Rs. 1,000/- per month for the first two years and Rs. 1,200/- per month during subsequent years upto a total maximum period of 4 years. In case of employed scholars, their salary will be protected. A Contingency of Rs. 3,000/- per year is attached with the fellowship.

For details and prescribed application forms, the candidates may write to the Director, Centre for Social Studies, South Gujarat University Campus, Surat—395 007, alongwith a self-addressed Rs. 1.50 postage stamped envelope size 23 cms. x 10 cms.) marked "Application for Fellowship".

Last Date for obtaining the application forms is **15th December 1988** and that last date for sending the complete application forms so as to reach the Centre is **5th January 1989.**

Gujarat University Publications

Sr. No.	*Name of the Book*	*Author*	*Price Rs. P.*
1.	The Evaluation of the Concept of Atman & Moksa	Dr. G.N. Joshi	15.00
2.	Abdu'r Rahim Khan-I-Khanan & his Literary Circle	Dr. Chhotubhai R. Naik	15.00
3.	Some Medieval Sculptures of North Gujarat	Dr. H.A. Majumdar	10-00
4.	The Structural Temples of Gujarat	Dr. Kantilal F. Sompura	25-00
5.	A Comparative Study of the Project & Sociometric Approaches in Personality	Dr. Pablo Gil. S.J.	15-00
6.	The Land Revenue Settlements & the British Rule in India	Dr. S.D. Patel	12-00
7.	Avidya—A Problem of Truth and Reality	Dr. E.A. Soloman	10-00
8.	A Reconstruction of the Original Interpretations of the Manusmriti	Dr. R.S. Betai	17-00
9.	Bhavai	Dr. Sudhabahen R. Desai	18-00
10.	The Origin & Development of the Theory of Rasa and Dhvani in Sanskrit Poetics	Dr. T.S. Nandi	20-00
11.	Self Perception its Correlates	Dr. K.K. Bhatt	15-00
12.	Certain Aspects of Picarian Group of Birds	Dr. U.N. Raval	10-00
13.	The Commentaries of the—Samkhya Kariha—A Study	Dr. E.A. Soloman	7-00
14.	*Psychological Study of Factors—Associated with Truancy*	*Dr. J.B. Thakor*	*14-00*
15.	Synopses of 39 Doctoral Theses	—	10-00
16.	Genetic, Biochemical and Cytochemical Studies on Lucoderma	Dr. V.C. Shah	6-50
17.	Socrates & Christ	F.C. Dawer	20-00
18.	Liberalism and Less Developed Countries	Edited by M.P. Bhatt & M.S. Trivedi	11-00

Address Enquiries to :

Publication Officer
GUJARAT UNIVERSITY
Ahmedabad 380009

Some Gauhati University Publications

Sl. No.	Titles	Authors	Price (Rs.)
1.	Chandrakanta Abhidhan (Assamese-English Dictionary)	Ed. by Dr. M. Neog Dr. U.N. Goswami	200.00
2.	Guru-carita Katha	Ed. by Dr. M. Neog	130.00
3.	Indo-English Poetry	by Dr. P. Kotoky	25.00
4.	Gandhism & Modern India	by N.K. Bose	6.00
5.	A Descriptive Analysis of the Bodo Language	by Dr. P.C. Bhattacharyya	30.00
6.	Concept of Personality in Sankhya-Yoga & the Gita	by Dr. K.C. Das	25.00
7.	Assamese Popular Superstitions & Assamese Demonology	by B. Rajkhowa	7.00
8.	Inscriptions of Ancient Assam	Ed. by Dr. M.M. Sarma	70.00
9.	Caste as a Form of Acculturation	by Dr. S.N. Ratha	17.00
10.	Sanskrit & Allied Indian Studies in U.S.	by Dr. V. Raghavan	20.00
11.	A Study of Culture Change in Two Garo Villages of Meghalaya	by Dr. D.N. Mazumdar	60.00
12.	A Study of Some Traditions of the Performing Arts in Eastern India	by Dr. (Mrs.) K. Vatsyana	54.00
13.	Structure of Assamese	by Dr. G.C. Goswami	75.00
14.	Three Decades of the Working of the Indian Constitution	by S.K. Dutta	17.00
15.	Assamese Lessons (Assamese Self-Taught)	by Dr. M.N. Sarma	7.00
16.	Asamiya Paribhasha, Vol. I		8.50
17.	Asamiya Paribhasha, Vol. II		6.00
18.	Asamiya Paribhasha, Vol. III		5.50
19.	Asamiya Baijnanik Paribhasha, Vol. I		17.00

UNIVERSITY PUBLICATION DEPARMTENT, GAUHATI UNIVERSITY, GUWAHATI-781014.

With the Best Compliments of :

ANNAMALAI UNIVERSITY

PUBLICATIONS DIVISION

More than 600 Titles Published during the past 60 years

Latest English Titles :

No.	*Title*	*Author/Editor*	*Price* *Rs. P.*
1.	The Universal Vision of Saint Ramalinga	**R. Ganapathy**	50.00
2.	Tagore, Bharathi and T.S. Eliot : Towards Creative Unity	**K. Chellappan**	12.00
3.	Journal of the Annamalai University, Part-A, Humanities Vo. 33, 1987		35.00
4.	Journal of the Annamalai University, Part-B, Sciences Vol. 34, 1988		35.00
5.	Tholkappiam Porulathigaram (English Translation)	**E.S. Iyer**	35.00

For Detailed Price List Write to :

Special Officer, Publications Division
Annamalai University
Annamalai Nagar-608 002 INDIA

Books for Scholars, Research Workers and Discerning Readers from

North-Eastern Hill University Publications

1.	The Gandhian Way —**by Amlan Datta** (1985)	Rs. 45.00 (Hard Cover) Rs. 20.00 (Soft Cover)
2.	Report on the Khasi & Jaintia Hills (1853) —**by A.J.M. Mills** (Delux reprint edition—1986)	Rs. 225.00
3.	Socio-Economic Schism of Indian Polity and Gandhi —**by P.N. Mathur (1985)**	Rs. 30.00
4.	Overcoming Under Development —**by Nitish R. De (1985)**	Rs. 48.00
5.	Around the Hills and Dales of Arunachal Pradesh (Illustrated) —**by Krishna Haldipur (1985)**	Rs. 50.00
6.	Interest Rate—Its Impact on Price Movement —**by P.N. Mathur (1986)**	Rs. 45.00
7.	Studies in the History of North-East India **(H.K. Barpujari Felicitation Volume—1986)**	Rs. 200.00
8.	Interpreting Indian History —**by Irfan Habib (1986)**	Rs. 30.00 (Hard Cover) Rs. 15.00 (Soft Cover)
9.	Five Essays on Kant **Edited by Mrinal Miri (1986)**	Rs. 40.00
10.	Verrier Elwin and India's North Eastern Borderlands **by N. Rustomji**	Rs. 45.00

Postage Charges Free for Orders above Rs. 100 00.
For Orders below Rs. 100.00, actual postage charges will be included in the Bill.

CONTACT
Director of Publications
North-Eastern Hill University
Midland Compound, Jowai Road, Shillong-793003
(Meghalaya)

SARDAR PATEL UNIVERSITY

GNAN GANGOTRI

A Book of Knowledge

A series published in Gujarati, 30 Vols. Royal Crown Size Hard Bound.

Subscription for complete set of 30 volumes (including postage) Rs. 1,000/- : Some opinions of experts

Shri Umashanker Joshi

'This series of Gnan Gangotri' will, I am sure, prove to be an ideal Home University.

Late Prof. Feroz Dawar

This work will be very useful to the college going students as well as the educated. The Sardar Patel University has undoubtedly performed yeomen services to society by undertaking to publish such useful volumes.

Late Dr. K.M. Munshi

The Project of Gnan Gangotri should be most welfome. It is essential that literature and knowledge be disseminated through our regional languages. I am sure the present series will go a long way in fulfilling this need,

Other Publications

1. Indomitable Sardar and Triumph of Borsad—S.K. Kshirsagar : Rs. 20-00.
2. Ordeal of the leader Sardar Vallabhbhai Patel—A.R. Tiwari : Rs. 98-00.
3. Sardar Patel (A collection of lectures series). : Rs. 26/-
4. Religon and Poetry—R.A. Dave : Rs. 26/-
5. Sanskrit Prahasanas—C P. Shukla : Rs 20/-
6. Industrial Relations—H.D. Savlani : Rs. 13/-
7. Integration of District Dairy Cooperatives in Gujarat—M M. Shah : Rs. 15/-
8. Multiple Beam Interferometry and Crystal Growth by Dr. A.R. Patel : Rs. 7/-

For Details Please Write to :

The Publication Officer
Publication Unit, Bhaikaka Library
SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar—388 120
Dist : Kheda (Gujarat) India

CONCEPTS IN COMMUNICATION INFORMATICS & LIBRARIANSHIP (CICIL)

General Editor : S.P. AGRAWAL

CICIL—1	Development of Library Services in India—Social Science Information **S.P. Agrawal**	Rs. 150.00
CICIL—2	Development of Documentation in India **S.P. Agrawal**	
CICIL—3	Unesco and Social Science Retrospect and Prospect **S P. Agrawal and J.C. Aggarwal**	Rs. 250.00
CICIL—4	INDIANA : A Bibliography of Bibliographical Sources **M.K. Jain**	Rs. 200.00
CICIL—5	Dimensions of Library and Information Science : Papers contributed in honour of the 61st birthday celebrations of Prof. P.N. Kaula **V. Venkatappaiah (Ed.)**	
CICIL—6	Book Numbers : Indian Methods **M.P.Satija and S.P. Agrawal**	
CICIL—7	National Policy for University Libraries in India : Problems and Perspectives **N.B. Inamdar and L.S. Ramaiah**	Rs. 250.00
CICIL—8	Media Utilisation for the Development of Women and Children **B.S. Thakur and Binod C. Agrawal**	
CICIL—9	Terrorism : An Annotated Bibliography **Susheela Bhan**	
CICIL—10	Transnational Library Relations—The Indo-American Experience **M.B. Konnur**	

Concept Publishing Company

A/15-16, Commercial Block, Mohan Garden
New Delhi-110059

Show Room **Phone : 272187**
23, Ansari Road, Daryaganj, NEW DELHI-110002

CLASSIFIED ADVERTISEMENTS

S.N.D.T. WOMEN'S UNIVERSITY
1, NATHIBAI THACKERSEY ROAD
BOMBAY-400 020

Advertisement No. 12 **Dated : November 18, 1988**

Applications are invited in the prescribed forms available at the University Office between 10-30 a.m. to 1.00 p.m. and 1-30 p.m. to 2-30 p.m. from Monday to Friday and 10-30 a.m. to 12.00 Noon on Saturday, on payment of Rs. 5/- (M.O./in cash) for the following posts, to be filled in at the University Department and its conducted Institutions at Bombay and Poona, so as to reach the undersigned on or **before fifteen days** from the date of its advertisement. Please collect details of the posts from the counter alongwith application form.

Sr. No	Post and Name of the Dept./Institution	Total Post	Post under Open Category	Post under Reserved Category	Medium of Teaching
A	**Post-Graduate Diploma in Mass Communication for Children at SNDT College of H.Sc for Women, Poona**				
1.	Sound Recordist	ONE TMP TENURE	ONE TMP TENURE	—	—
B.	**Dept. of Post-Graduate Studies & Rasearch, SNDT Women's University, Bombry-20**				
1.	Professor in Hindi	ONE	ONE	—	Hindi
2.	Professor in English	ONE	ONE	—	Eng
*3.	Lecturer in Economics	ONE	—	ONE	Mar & Eng
C.	**Post-Graduate Dept. of Nursing Education, Bombay-20**				
1.	Lecturer in Nursing	ONE	ONE	—	Eng
D.	**Post-Graduate Dept. of Music, Bombay-20**				
1.	Tabalji	ONE	ONE	—	—
E.	**Dept. of Post-Graduate Studies & Research, Poona**				
1.	Reader in Hindi	ONE	ONE	—	Hindi
2.	Lecturer in Commerce	ONE	ONE	—	Eng & Mar
3.	Lecturer in Psychology	ONE	ONE	—	Mar & Eng

The posts will be filled in subject to approval from the State Government or *if filled in due to exigency*, they will be made on temporary basis only. In case Government does not approve these posts they will be withdrawn.

Minimum qualifications, salary scales, etc. of the teachers are as per approved UGC scales and qualifications. Applications of Scheduled Castes/Scheduled Tribes/Nomadic Tribes/DNT will be considered as per Government Directives. *indicates post under reserved category and will be filled by SC/ST/DT/DMT candidates only Incomplete applications and applications on a plain paper will not be considered. Applicants (Local) are advised to submit their application forms (duly filled in) alongwith three copies of certificates, to Inward Clerk, Stores Department, University Office, Bombay-20 within the scheduled.

REGISTRAR

HIMACHAL PRADESH
UNIVERSITY
"RECRUITMENT BRANCH"

Advertisement No. 6/88

Dated : 17th Nov., 1988.

Applications are invited (on prescribed form for the following teaching and non-teaching posts so as to reach **the Section Officer, Recruitment Branch, H.P. University, Shimla-171005,** alongwith a crossed Indian Postal Order of Rs. 20/- (Rs. 10/- for SC/ST) payable to the Finance Officer by **December 23, 1988.**

I. **Professors : (Pay Scale : Rs. 4500-7300)** in the following subjects of the Teaching Deptts :

Botany/Zoology-1 (Spl. in Physiology or Bio-Chemistry), Business Administration-1, Hindi-1, Laws-1, Mathematics-2 (One for Pure Mathematics), Physics-1 (Spl. in Experimental Physics with a strong background of Electronics, Solid State Physics or Material Science), Political Science-1, Public Administration-1 (Plan post).

II. **Readers : (Pay Scale : Rs. 3700-5700)** in the following subjects of the Teaching Deptts :

Botany/Zoology-1, Business Administration-1, Computer Science-1 (Plan post), Hindi-1, Journalism & Mass Communication-1 (Plan post), Music-1, Mathematics-1, Physics-3 (One post-Spl. in any branch of Experimental Physics like X-rays, Crystalography, Spectroscopy or Experimental Solid State Physics), Public Administration-1, Political Science-1, Sanskrit-1, Yoga-1, Statistics-1, Education-3 (two plan posts under D.S.A. Programme with the *Specialization of : (i) Education of the* Disadvantaged groups including Scheduled Caste/Scheduled Tribe and Rural Women and other deprived communities, (ii) Educational Technology including hardware technology, Computer, etc., (iii) Orientation of training College Teachers in various teaching and evaluation innovations).

III. **Lecturers (Pay Scale : Rs. 2200-4000)** in the following subjects of the Teaching Deptts :

Botany/Zoology-2, Chemistry-3 (Two in Physical Chemistry, and One in Inorganic Chemistry), Computer Science-2

(Plan posts), Economics-1, Education-3, English-1. Laws-1, Music-1, Psychology-1.

For Academic Staff College
Lecturer-1 (Plan post)

IV. **Controller of Examinations-1** (Pay Scale: Rs. 4500-7300).

V. **Librarian** (Pay Scale: Rs. 1500-2500/1500-2000, unrevised according to qualifications.

VI. **Finance Officer-1** (Pay Scale: Rs. 4500-7300).

VII. **Medical Officer-I** (GDO-II, Female) (Pay Scale: Rs. 940-1850+NPA *unrevised*).

VIII. **Tabla Assistant-1** (Pay Scale: Rs. 480-880; unrevised).

Candidates already in service should send their applications through proper channel. An advance copy, however, may be sent direct.

Candidates called for interview will have to come to the place of the interview at their own expenses and bring with them their original research papers, degrees and certificates, etc. for verification.

The University reserves the right to negotiate with suitable person or persons, if necessary, who may not have applied formally.

The University also reserves the right to fill up or not to fill up the post/s or to call only selected candidates for interview. The number of posts likely to be filled may vary.

Other things being equal, preference will be given to the candidates belonging to the Scheduled Caste/Scheduled Tribe for appointment to the post of Lecturer.

Application form alongwith detailed qualifications can be obtained from the **Section Officer, Recruitment Branch, H.P. University, Shimla-171005**, personally on payment of Rs. 5/- or by making a written request to him accompanied by self-addressed envelope of 23 x 10 cms. with postage stamps affixed worth Rs. 1.40 Paise and a postal order of Rs. 5/- drawn in favour of the Finance Officer, H.P. University.

Note: (i) Applications received on plain paper, applications not in conformity with the requirements as specified in the application form and applications received after the last date will not be entertained, and no correspondence will be entertained in this regard.

(ii) A person applying for more than one post should send a separate application for each post.

(iii) Persons who have applied earlier in response to Advt. No. 1/87, dated 7.3.87 for the posts of Professor in Bot/Zoology, Physics and Controller of Exams. and against Advt. No. 1/88, dated 29-1-88 for Professor in Bus. Admn., Public Admn., Reader in Computer Sci., Education, Journalism & Mass Comm., Pub. Admn., Sanskrit, Yoga, Statistics, Lecturer in Chemistry, Computer Sci. and Education need not to apply again. However, they may send additional informations, if any.

A.R. Chauhan
REGISTRAR

JAWAHARLAL NEHRU UNIVERSITY

NEW DELHI-110067

Advt. No. A&E-II/7/88

JNU has openings for the following faculty positions in the areas of study as indicated against each:

Professor (Scale of Pay: Rs. 4500-7300) one each in

1. Gulf Studies;
2. Environmental Law;
3. International Space Law; and
4. University Service & Instrumentation Centre (USIC)

Qualifications: For (1) above—(a) A first or high second class Master's degree in the field of Social Sciences; (b) A Ph.D. degree or a published work of comparable standard on a subject related to West Asian/Gulf Studies; (c) ten years experience of teaching and guiding research in the field of West Asian/Gulf Studies; and (d) knowledge of Arabic/Persian.

For (2) and (3) above—(a) Eminent scholar in International Law with published work of high quality, actively engaged in research in the areas of **International & Comparative Environmental Law**, and **International Space Law** respectively. Ten years' experience of teaching and/or research in the same field. Experience of guiding research at doctoral level; **OR** (b) An outstanding scholar of International Law with established reputation who has made significant contribution to knowledge in the fields of **International & Comparative Environmental Law** and **International Space Law** respectively.

For (4) above—(a) A Ph.D. degree in any branch of Science or Technology or Engineering or published work of an equally high standard: and consistently good academic record with first or high second class Master's degree; (b) At least 10 years experience of research in a reputed instrumentation laboratory or organization; (c) Demonstrated ability in designing/fabricating, and maintaining of major instruments; and (d) The successful candidate must possess leadership qualities to get work done at the shop floor and must have competence in the area of Micro Electronics.

The candidate shall be expected to look after the service and maintenance of sophisticated instruments in various Science Schools, as well as the Central Equipment facilities of the University such as NMR, Liquid Nitrogen Plant.

(**Notes**: (a) The post mentioned at Sl. No. (3) is initially for a *period of five* years but is likely to continue; and (b) For posts at Sl. No. (1) and (4) the University may make offer as Associate Professor in the pay scale of Rs. 3700-5700 if none of the candidates is found suitable for professorial assignment).

Any of the qualifications/experience may be relaxed at the discretion of the University. It will also be open to the University to consider the names of suitable candidates who may not have applied.

Application forms may be obtained free of cost in person or by sending a self-addressed envelope (23 cm × 10 cm) duly stamped to the Deputy Registrar (Academic & Establishment), Room No. 204-B, Administrative Block, Jawaharlal Nehru University, New Delhi-110067. The applications in prescribed form, complete in all respect duly forwarded by the Competent Authority (for those in service) should reach this University latest by **December 19, 1988.**

ASSAM AGRICULTURAL UNIVERSITY

ADMISSION NOTICE NO. 4/1988

Applications in prescribed forms are invited for admission into the following degree programmes of the University in the Faculty of Agriculture under course credit system for the session 1988-89 commencing from February, 1989.

(A) Ph.D. Degree Programme in the Subjects :

1. Agricultural Economics & Farm Management
2. Soil Science
3. Agronomy
4. Entomology
5. Horticulture
6. Plant Breeding & Genetics
7. Plant Pathology

(B) M.Sc. (Agri.) Degree Programme in Disciplines :

1. Agricultural Economics & Farm Management
2. Agronomy
3. Crop-Physiology
4. Agril. Bio-Chemistry & Agril. Chemistry
5. Extension Education (Agri.)
6. Entomology
7. Horticulture
8. Nematology
9. Plant Breeding & Genetics
10. Plant Pathology
11. Soil Science
12. Tea Husbandry & Technology

(C) M.Sc. (Home Science) Degree Programme in the Disciplines :

1. Food & Nutrition
2. Child Development & Family *Relations*
3. Textiles & Clothing

(D) M.Sc. (Sericulture)

Minimum Qualification for Admission

(A) Ph.D. Programme

A candidate must have passed the M.Sc. (Agri.) degree examination of this University or any other University recognised by the Assam Agricultural University with basic degree in Agriculture with a minimum OGPA of 3.00 to 4.00 scale or 55% marks in aggregate (in traditional system) in M.Sc. (Agri) degree examination. This requirement is however, relaxable to an OGPA of 2.85 in 4.00 scale or 50% marks in aggregate under traditional system for the deputed candidates having 5 years of service experience after obtaining Master's Degree.

(B) M.Sc. (Agriculture) Programme

A candidate must have passed the B.Sc. *(Agri.) degree examination of this* University or of any other University *recognised by the* **AAU** *securing* a minimum OGPA of 2.60 in 4.00 scale or its equivalent or minimum of 50% marks in the traditional system in the qualifying examination(s). This requirement is however, relaxable to an OGPA of 2.50 or 45% marks in traditional system respectively in the case of SC/ST candidates and for candidates having atleast 2 yrs. of professional experience, provided further that the minimum OGPA may be relaxed for candidates who are deputed by the State Govt. of Assam and who possess at least 5 (five) years of service experience after obtaining B.Sc. (Agri.) degree which shall either be an OGPA of 2.30 in 4.00 scale or 42% marks in aggregate in the qualifying examination under the traditional system.

(C) M.Sc. (Home Science) Programme

A candidate must have passed the B.Sc. (Home Sc.) degree examination of this University or of any other recognised University securing a minimum OGPA of 2.60 in 4.00 scale or its equivalent or minimum of 50% marks in aggregate in the traditional system in the qualifying examination(s). This requirement is however, relaxable to an OGPA of 2.50 or 45% marks in the case of SC/ST candidates and for candidates having at least 2 (two) years of professional experience, provided further that the minimum OGPA may be relaxable for candidates who are deputed by the State Govt. of Assam and who possess at least 5 (five) years of service experience after obtaining B.Sc. (Home Sc.) degree which shall either be an OGPA of 2.50 in 4.00 scale or 42% marks in aggregate *in the qualifying* examination under the traditional system.

(D) M.Sc. (Sericulture)

A candidate must have passed the B.Sc. with Zoology, Chemistry and *Botany preferable with honours in* Zoology and should have possessed *recognised diploma in Sericulture.* Such candidates must have 2 years of service experience and must be sponsored by the State Govt. of Assam. Candidates with M.Sc. in Zoology, after passing B Sc. with Zoology, Chemistry & Botany preferably with Honours in one of these subjects are also eligible to apply.

How to Apply

Application forms for the above degree programme may be obtained from the office of the Director of Post-Graduate Studies, Assam Agricultural University, Jorhat-13 on payment of Rs. 5.00 (Rupees five) only in terms of crossed I.P.O. drawn in favour of the Director of Post-Graduate Studies, Assam Agril. University, either personally or by sending a self-addressed, stamped envelope of size 10 x 22 cm affixing postal stamp of Rs. 1.50 (Rupees *one and fifty paise) only.*

Last Date of Receipt of Application

The application in prescribed form complete in all respects must reach the Director of Post Graduate Studies, Assam Agril. University, Jorhat **on or before 15th December, 1988.** Candidates who are employees of the State Govt. or any other organisation must apply through proper channel.

Interview

Candidates fulfilling the minimum academic requirements shall have to appear before the selection committee as and when called for at their own expenses. Selected candidates who are employees of the State Govt. or any other organizations shall have to furnish a copy of the order of deputation/or release from the Govt./employer at the time or admission.

In connection with Ph.D. Programme the University reserves the right to refuse admission in a subject(s) *in case* there is shortage of qualified teachers *in the concerned department* at the time of admission.

Application for admission into University Hostel shall have to be made in separate prescribed Forms. Admission into Hostel shall be subject to availability of seats.

J.N. Talukdar
REGISTRAR

इन्दिरा गांधी राष्ट्रीय मुक्त विश्वविद्यालय
INDIRA GANDHI NATIONAL OPEN UNIVERSITY

YMCA Cultural Centre, 1 Jai Singh Road, New Delhi-110 001.

Advt. No. 6/Admn./88-89

Applications are invited from Indian **Citizens possessing the requisite qualifications for filling up the following posts in the Pay Scales shown against each plus allowances as admissible under the University rules.**

1. Cameraman (SC/ST ONLY)

Scale of Pay : Rs. 2000-60-2300-EB-75-3200-100-3500 (Revised)

Qualifications and Experience

(a) Degree from a recognised University.

(b) Diploma in cinematography from FT II or equivalent.

(c) *Atleast two years experience of* working with film/video camera.

Desirable

(a) Experience of working in a television organization.

(b) Good knowledge of broadcasting systems in India & abroad.

Age Limit : 35 years.

2. Senior Technical Assistant/Programming Assistant

Scale of Pay : Rs. 1640-60-2600-EB-75-2900

Qualifications and Experience
Essential

Master's Degree in any discipline with Diploma in Computer Science or Bachelor of Engineering in Computer Science/Electronics and Telecommunication.

Bachelor's Degree in any discipline with two years experience in independently programming and system development.

Age limit : 35 years

3. Senior Assistant

Scale of Pay : Rs. 1400-40-1600-50-2300-EB-60-2600

Qualifications & Experience

(a) A good University Degree

(b) Eight years experience in Secretarial/Admn. work.

Age Limit : 35 years

4. Public Relations Assistant

Scale of Pay : Rs. 1400-40-1600-50-2300-FB-60-2600

Qualifications
Essential

Graduate with 3 years experience or Post-Graduate with 1 to 2 years experience in relevant field.

Desirable

Degree or Diploma in Journalism or Public Relations.

Age Limit : 35 years

4. Proof Reader

Scale of Pay : Rs. 1400-40-1800-EB-50-2300

Qualifications & Experience

A good University degree with certificate course in Printing Technology and 3 years experience in Proof Reading in a reputed organisation.

OR

Diploma in Printing with 3 years experience in a reputed organisation.

Age Limit : 30 years.

6. Junior Proof Reader

Scale of Pay : Rs. 1200-30-1560-EB-40-2040

Qualification & Experience

Graduate with 2 years experience in Proof Reading

OR

Certificate course in Printing Technology with 5 years experience.

Age Limit : 30 years

7. Data Entry Operators

Scale of Pay : Rs. 950-20-1150-EB-25-1500

Qualifications & Experience
Essential

Higher Secondary (10+2) and experience of working on IBM-PC compatible machines for word-processing and data preparation.

Age Limit : 25 years

Desirable : General awareness of PC-software.

8. Key Punch Operator

Scale of Pay : Rs. 950-20-1150-EB-25-1500

Qualification

Higher Secondary / Matriculation. Experience in operating Electric Key Punching Machine (Numerical and Alphanumerical) and knowledge of handling computer input/output work.

Age Limit : 25 years

General Conditions

The University reserves the right to (i) relax any of the qualifications in exceptional cases and/or in the case of persons already holding comparable positions in a university/research institution on the recommendations of the selection committee; (ii) consider the *names of suitable candidates who may* not have applied, on the recommendations of the selection committee.

The University also reserves the right not to fill up any of the vacancies advertised if the circumstances so warrant.

The prescribed application forms can be had from the **Registrar, Indira Gandhi National Open University, YMCA Cultural Centre, 1, Jai Singh Road, New Delhi-110001 on a written request by post and accompanied by a self-addressed envelope (size 13 cms × 28 cms) bearing postage stamps of Re. 1.00. Completed application forms alongwith attested copies of degrees, other certificates, marksheets published research articles, experience etc., should reach the Registrar at the above address on or before 31st December, 1988.**

15% and 7½% of the total number of vacancies are reserved for Scheduled Castes/Scheduled Tribe candidates, *respectively. They must enclose a certificate* issued by the competent authority in support of their claim.

SC/ST Candidates called for interview from outside Delhi will be paid single second class railway fare to and fro by the shortest route from their place of residence/work.

The University reserves the right to restrict the number of candidates to be called for interview.

REGISTRAR

A.I.U. PUBLICATIONS

	Rs.
Universities Handbook—1985-86	450.00
Equivalence of Foreign Degrees	180.00
Handbook of Engineering Education—1988	50.00
Handbook of Medical Education—1987	45.00
Handbook of Management Education—1988	In Press
Handbook of Agricultural Education—1986	40.00
Handbook of Distance Education—1986	35.00
Association of Indian Universities—1925-75	50.00
Association of Indian Universities—1925-85	100.00
New Technologies in Higher Education (HB)	120 00
(PB)	80 00
Studies in Distance Education (HB)	60 00
(PB)	20.00
Universities and Research	45 00
University Finance—A Statistical Profile II	75.00
State Funding of Universities	50.00
Elite in the Making	40.00
University and College Finance—Seminar Papers	50.00
Economics of College Education—A Study of Hindu College, Delhi	30.00
Educational Statistics at a Glance	75.00
Education and Economic Development	25.00
Report of the Task Force Autonomous Colleges and Departments	60.00

BIBLIOGRAPHY OF DOCTORAL DISSERTATIONS

Social Sciences	1857-1970	50.00
Humanities	1857-1970	100.00
Physical Sciences	1857-1970	125.00
Biological Sciences	1857-1970	100.00
Social Sciences and Humanities—1970-75		150.00
Physical Sciences—1970-75		120.00
Biological Sciences—1970-75		120.00
Social Sciences and Humanities—1975-76		50.00
Natural and Applied Sciences—1975-76		90.00
Social Sciences and Humanities—1976-77		70.00
Natural and Applied Sciences—1976-77		120.00
Social Sciences and Humanities—1977-78		90.00
Natural and Applied Sciences—1977-78		100.00
Social Sciences and Humanities—1978-79		90.00
Natural and Applied Sciences—1978-79		125.00
Social Sciences and Humanities—1979-80		90.00
Natural and Applied Sciences—1979-80		130.00
Social Sciences and Humanities—1980-81		120.00
Natural and Applied Sciences—1980-81		180.00
Social Sciences and Humanities—1981-82		150.00
Natural and Applied Sciences—1981-82		225.00
Social Sciences and Humanities—1982-83		160.00
Natural and Applied Sciences—1982-83		250.00
Social Sciences and Humanities—1983-84		180.00
Natural and Applied Sciences—1983-84		320 00
Social Sciences and Humanities—1984-85		200 00
Natural and Applied Sciences—1984-85		In Press
Social Sciences & Humanties—1985-86		In Press
Natural & Applied Sciences—1985-86		In Progress

ON EXAMINATIONS

Computer in Examinations (Why & How)	65.00
Scaling Techniques : What, Why and How	75.00
Conduct of Examinations	35.00
Towards Better Questions	7.00

	Rs.
Monograph on Grading	5.00
Monograph on Question Banking	7.00
Monograph on Internal Assessment	10.00
Monograph on Test and Item Analysis	17.00
Monograph on Question Banking in English Language and Literature	10.00
Monograph on Practical Examinations	9.00
Monograph on Semester System	20.00
Research Abstracts—Parts I, II and III	Each 6.00
Research Abstracts—Part IV	14.00
Monograph on Sample Free Item Analysis	50.00
Monograph on Moderation of Examination Results	8.00
Monograph on Syllabus Analysis and Restructuring	10.00
Monograph on Revaluation of Answer Scripts	12.00
Assessing Non-Scholastic Aspects of Learners Behaviour	14.00

STATUS REPORTS ON

Grading in Universities	35.00
Question Banking in Universities	25.00
Internal Assessment in Universities	30.00
Internal Management in Universities	30.00
Preparations made by Universities to Receive 10+2 Input	30.00

QUESTION BANK BOOK SERIES

Undergraduate Level *(English Script)*

Mathematics		80.00
Physics		40.00
Chemistry		75.00
Zoology		50.00
Botany		40.00
History		25.00
Geography		35.00
Psychology		55.00
Economics		45.00
Commerce		45.00
Political Science		35.00
Foods & Nutrition		25.00
Sociology		45.00
English Language and Literature		35.00
Physiology		45.00
Pharmacology		35.00
Automobile Engineering		35.00
Law of Contracts		25.00
Anatomy		60.00
Constitutional Law		35.00
Electrical Power System		75.00
Zoology	(Hindi Script)	100.00
Botany		In Press
Chemistry		160.00

Postgraduate Level

Mathematics	85.00

SPORTS & PHYSICAL EDUCATION

Physical Fitness and Sports Standards in Universities	50.00
Handbook of Rules and Regulations for Inter-University Tournaments	20.00
Gymnastic Exercises for Men and Women	each 5.00

BOOKS ALSO AVAILABLE WITH LEADING BOOKSELLERS IN THE COUNTRY

Address Enquiries to : **Under Secretary (Publications)**

ASSOCIATION OF INDIAN UNIVERSITIES
AIU House, 16 Kotla Marg, New Delhi-110002
Telephones : 3310059, 3312305, 3313390, 3312429, 3323049
Telex : 31-66180 AIU IN Gram : ASINDU

UNIVERSITY NEWS, MONDAY, DECEMBER 5, 1988 Regd. No. R.N. 7180/63 Delhi Postal Regd. D(C)1088

Latest from Mittal Publications

—International Encyclopaedia of Indian Literature—Ganga Ram Garg

Volume I (Sanskrit, Pali, Prakrit & Apabhramsha) Rs. 600.
Volume II (Tamil) Rs. 180.
Volume III (Assamese) Rs. 140.
Volume IV (Kannada) Rs. 175.
Volume V (Telugu) Rs. 200.
Volume VI (Malayalam) Rs. 200.

—Encyclopaedic Dictionary of Economics (5 Vols)—N.B. Ghodke, Rs. 1000 (Set).
—Indian Nation Builders (3 Vols) Rs. 975 (Set).
—Sacred Books & Early Literatures of the East (14 Vols)—C.F. Horne Rs. 5000 (Set).
—Vestiges of Old Madras (Indian Record Series) (4 Vols)—H.D. Love Rs. 1800 (Set).
—Manipur Past & Present (Vol. I)—N. Sanajaoba, Rs. 500.
—Living Races of Mankind (2 Vols)—H.N. Hutchinson, Rs. 1200 (Set).
—Encyclopaedia of Natural History (2 Vols)—A.H. Miles, Rs. 495 (Set).
—Frontier & Overseas Expeditions from India (7 Vols)—Compiled in Army Hqrs, India, Rs. 2000 (Set).
—Collection of Treaties, Engagements and Sanads Relating to India and Neighbouring Countries (14 Vols)—C.U. Aitchison, Rs. 3600 (Set).
—Lands & Peoples of the World (6 Vols)—J.A. Hammerton, Rs. 2500 (Set).
—History of American Baptist Mission in North East India (Vol. I)—M. Sangma, Rs. 160.
—A Dictionary of Tamil Proverbs—H. Jensen, Rs. 450.
—Marriage & Worship in The Early Societies (4 Vols)—J.G. Fraser, Rs. 1800 (Set).
—Secret History of World Religions (2 Vols)—E. Schure, Rs. 500 (Set).
—Studies in Tibeto-Himalayan Languages—D.D. Sharma.

Volume I (A Descriptive Grammar of Kinnauri) Rs. 160
Volume II (Tribal Languages of H.P.) Rs. 250.

—Mysore Tribes and Castes (5 Vols)—L.K.A. Iyer, Rs. 2500 (Set).
—Dictionary of Classical Antiquities, Mythology, Religion, Literature and Art—O. Seyffert, Rs. 500.
—Grasses of Maharashtra : An Annotated Inventory—Deshpande & Singh Rs. 65.
—Urban Squatter Housing in Third World—A.R. Basu, Rs. 300.
—Gazetteer of South India (2 Vols)—Francis, Nicholson, Middlemiss, Barber, Thurston, Stuart, Rs. 800.
—Ballads of Bengal (4 Vols)—D.C. Sen, Rs. 1800 (Set).

—Dictionary of Agricultural & Allied Sciences—L.L. Somani.
Volume I (Dictionary of Agronomy) (4 Parts) Rs. 250 each.
Volume II (Dictionary of Animal Husbandry) (2 Parts) Rs. 250 each.
Volume III (Dictionary of Plant Sciences) (5 Parts) Rs. 250 each.
Volume IV (Dictionary of Soil and Fertilisers) (4 Parts) Rs. 250 each.
(Other volumes will follow shortly).

Phone : 7217151

Place Your Order to :

Mittal Publications

(Publishers of Scholarly Books)
B-2/19-B, Lawrence Road,
DELHI-110035 (INDIA)

Printed & Published by SUTINDER SINGH, on behalf of the Association of Indian Universities, AIU House, 16 Kotla Marg,
New Delhi-110002. Grams : ASINDU. Phones : 3315105, 3313390, 3312305, 3310059 and 3312429 Telex 31 66180 AIU IN
Press (P) Ltd. at Navjeevan Printers, 1-E/2, Jhandewalan Extension, New Delhi-110055. Tel. 529157